



# Thomas A Edison Papers

*A SELECTIVE MICROFILM EDITION*

*PART IV  
(1899-1910)*

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The original documents in this edition are from the archives at the Edison National Historic Site at West Orange, New Jersey.

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**Edison Ore Milling Syndicate, Ltd., and Related Companies  
Standard Construction Corporation, Ltd., Files  
Correspondence (1903)**

This folder contains correspondence and other documents relating to the work of the Standard Construction Corp., Ltd. Most of the letters are to or from Edison and William Simpkin, chief engineer. Included are numerous drafts in Edison's hand. The documents deal mainly with the design and construction of the Dunderland works and operations at the Edison Portland Cement Co. in Stewartville, New Jersey. Several documents pertain to briquetting, including reports by Simpkin and Professor Henry Louis. Also included are references to Edison's meetings with Simpkin in Florida. Some of the letters are accompanied by drawings.

More than 90 percent of the documents have been selected.

ALL LETTERS SHOULD BE ADDRESSED:-

**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANDOLLI, LONDON.

*Standard Construction Corporation Limited.*

*Fitzalan House, Arundel Street.*

*London, W.C.*

No: 17.

January 2, 1903.

THOMAS A. EDISON, Esq.

*Send to Hallen*

Dear Sir,

Mr. Hall is mailing you to-day a blue print *E* showing the many points in the Crushing Rolls which I think in your interests, and in the interests of the Syndicate, ought to be protected in this country, as I see nothing in the Patent Specifications which have been handed to me by Capt. Pollen covering some of the specific parts shown on the print and described in the accompanying specification.

I have only carried this specification out in my own words, leaving it to the Patent Attorney to put it into proper form and leaving it to him also to put the claims in, in a proper manner.

If you think I have covered all of the points worth covering, please to cable us and the matter can go forward, but if you have any additions, alterations, or suggestions to make, kindly let us have these at your convenience.

You will note that I have shown two ways to secure the plates to the Roll Centers, - one the manner which we are at

T.A.E.2.

present using, and another showing studs and nuts, not that I think the stud and nut is any better or perhaps not anything like as good as the manner which we are now using, but it is simply put in to prevent others from using a similar device.

It is not quite certain yet the exact day on which I shall leave here to pay my expected visit to you, so I will write you later or cable you with reference to this. Trusting you may have a very happy and prosperous year, I am,

Yours most sincerely,

Wm. Simpson

Prints not in yet  
J. H. Mandel

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLI, LONDON.

*Standard Construction Corporation Limited.*

*Fitzalan House, Arundel Street.*

*London, W.C.*

January 9, 1903.

H. E. DICK, Esq.

Dear Mr. Dick,

I have just received your cable saying that Mr. Edison leaves for Florida on the 20th February, for which I am greatly obliged. There are a great many things which I wish to become accomplished facts before I cross and as Mr. Edison will be in Orange up to the 20th of next month I shall delay sailing until the end of this month and this will enable me to complete what I have in hand and also enable me to bring with me a great many more drawings so that I can thoroughly discuss the whole of the layout with Mr. Edison.

I have just returned from Berlin where I have been taking up the matter of the Generators, etc. with Mr. Bergmann. He has I think written either you or Mr. Edison that the contract for this work has been placed in his hands. I am sure that this will be satisfactory news to both of you. This was not done without a considerable fight as some of our friends here were very anxious that the contract should be placed in this country and particularly one who is very much interested in the British

Westinghouse - it is not necessary to mention names. However, knowing that you and Mr. Edison were desirous that this contract should go to Mr. Bergmann, if it could possibly be managed and his prices were such that it would not be detrimental in any way to our Company, I took it upon myself to urge this matter very strongly with the result as stated.

There is going to be a big fight over the magnets and when I come over I shall discuss this matter very thoroughly with Mr. Edison and probably have a few suggestions to make which I think he will agree to. There is one thing in favour of placing the magnets with Mr. Bergmann and that is it will at once enable us to comply with the German Patent Law by having the magnets manufactured in that country.

When I have decided the exact date on which I shall leave here I will cable Mr. Edison so that you will know when to expect me. Everything is going on very well and we are making good progress.

Yours very truly,

Wm. Simpskin

ALL LETTERS SHOULD BE ADDRESSED TO—

**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANGOLLI, LONDON.

*Standard Construction Corporation Limited.*

*Fitzalan House, Arundel Street.*

*London, W.C.*

January 20, 1903.

H. E. DICK, Esq.

My dear Mr. Dick,

I have your favour of the 8th inst. and notice that you will be sailing on the 7th of February. I understand however from Mr. Hall that the other day he received a cable from you in which you said you would arrive here on the 20th February, so from that I take it that you have changed your mind and that I shall see you, as I hope I shall, in Orange before you sail. What is keeping me is this, that I think it absolutely imperative to place the order for the structural work of the buildings and conveyors before leaving here and take advantage of the now existing low prices. I have been watching the market very carefully all along and in every case so far have been able to come in and take advantage of prices and I am satisfied if I had not been able to do this we would have been obliged to pay much more for our work than the prices at which so far I have been able to make contracts for the work which has already been let out.

H.E.D.2.

I am bringing with me details of everything which I have done so that you and Mr. Edison can go over it with me, and I am satisfied it will meet with the approval of the both of you. I shall leave here on the 31st inst. or the 4th February and will cable Mr. Edison the day I sail so that you will know when to expect me.

With best wishes, I am,

Yours very truly,

Wm. Sampson

SECRET.

ALL LETTERS SHOULD BE ADDRESSED TO  
ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

*Standard Construction Corporation Limited,*

*Fitzalan House, Arundel Street,*

*London, W.C.*

January 23, 1903.

Dear Mr. Dick,

Replying to your favour of the 13th inst. would say that when I come over I shall have with me the whole of the specifications for all of the work which we have done up to the present, including of course the specifications and guarantees on the motors as I intend to discuss very fully the whole of this with Mr. Edison.

It looks now as if I shall be able to leave sometime between the 31st and 4th but I cannot tell at this writing as they wish to have a special meeting before I go to give me some instructions of which at present I don't know the slightest thing.

Trusting I shall have the pleasure of seeing you in Orange before you leave, I am,

Yours most sincerely,

*Wm. Simpson*

H. E. DICK, Esq.



Letter No. 16

Feb 24 1903

Dumplin -

I have gone all over the 6 record books of Cement runs and have got things pretty well worked out, I will send results of whole when I go north but thought I would send you briefly some conclusions.

1st: Should be covered closed shed for say 40 cars in winter with enough steam coils keep ore from freezing in cars. also journal oil from getting solid

2nd Steam pipes resting against hopper under Grants to give heat to iron of hopper to prevent ore freezing & blocking hopper -

3rd Pinion and large gear into which pinion meshes are altogether too narrow. that has been one of the troubles on our conveyors which were heavily loaded for instance 104- Top mixing belt, stress at circumference of 48 head drive pulley 1500 lbs, stress (allowing 80% efficiency for gears) on pinion about 1000 lbs while the gear & pinion is more than ample for

Strength the pressure per square inch is altogether too high even if gears were on dead pitch line - but they never stay there and on a 25 HP Conveyor I think length of pinion should be at least ten inches not for strength but for diminution of pressure & there should be good oil casing - The large gear into which pinion meshes can be quite light. On a 50 HP Conveyor pinion should be increased still further. These Conveyors with heavy pull out on large pulley is a peculiar combination with a train motor, so pinion must be abnormal.

4th - Look out for heavy width gears on shaft of roller feeds -

5th - Look out for excessive pressure per square inch on all pinions.

6th = 3 High ropes ~~=~~ we are going to turn down couplings between 3 High & Pulley drive to insert an arch plate. This permits having a rope always spliced & ready & this plate being taken out rope can be got in - 4 bolts in Coupler will be enough as more cause delay -

7th = twice the number of side guide rollers wanted on bottom of conveyor belts - also these rollers ought to be ~~be~~ two inches longer -

8th. Freddy & I have made several flexible couplers <sup>for motors</sup> at our little laboratory. I have one now that is perfect will send you drawings from Cement Works. —

9<sup>th</sup> You remember we had a sprocket wheel on 3 Highs to drive roller feed we ~~are~~ are going to utilize this to expedite putting in shear pins from which a great loss of time is had - to be left away we put a Worm wheel on shaft of which is a sprocket, by a pin in chain we connect quickly + by hand crank bring roll around so shear pin holes match. You will have to have something like this + this is simple -

10<sup>th</sup> Do not fail to have the blocks connecting top + bottom of housing of 3 High strong + rigid - the trouble we are having with our pulley

drive bearings is due to shock shifting  
of bearings. in housing of driven roller  
not a permanent movement so as to  
put shaft out of line but ~~is~~ a concussive  
springing. & this is transmitted to pulley  
shaft.

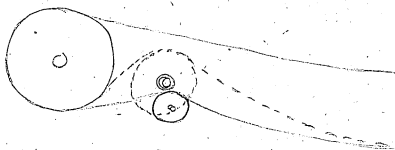
11th. Stud bolts locked by small wire  
running thro heads where bolts  
are around a circle is not sufficient  
the wire bend by constant shock.  
Either a larger wire or something  
else for locking in concussive  
machinery is necessary. oil joints etc  
some leak.

12- Bolls with nuts & cotter on Rolls  
do not lock except use RR Car Cotter  
with slot & cotter taper so it is  
driven in dead against head of nut  
& bent.

~~13- Use 10 ply bolts on 31~~

13- What size @ dia & length pins  
you going to use on Motors driving  
3 High & other rolls.  $\wedge$  I sure have  
plenty drops in casing & put in a  
plug so oil man can tell when  
he has proper amount oil in <sup>all</sup> oil  
casing. That's something we didn't  
have at Cement. Consequently lots our  
gears run dry & eat bad especially  
where pressure per sq. inch in bath  
was high.

14 = On conveyor belts. greater arc of contact on head drive pulleys are more efficient for grip bite or adhesion than longer slack we put in an idler thus



The idler was ordinary diameter with heavier shaft & larger roller bearings. This had the bearings but the roller bearings gave lots of trouble make yours as in dotted lines & closer up to pulley to increase the arc of contact & bite, we say 3 inch shaft and Regular self-lubricating chain bearing well secured on 1 wrap. Use 24 inch or more roller. With 25 feet slack this should not slip on heavy loads —

15- You cannot make Gunny Chambers too large. The floor should be double with thin sheet iron between the two floors - dttc on top of chamber - around bottom use wood run about 10 or 12 inches high & stiff. to this the gunny can be secured. Cracks in floor of cement were cause of great trouble also repairing of gunny at floor line as dirt collected at bottom outside & bulged gunny in - The board around bottom will stop this - Use stiff framing - the door was used was a failure - It was not self closing - The joint was no good - & we get a flap door always good & tight & powerfully self closing



Hand fan should be special (1) capable of running continuously without heating -  
The supply of oil heating device should be  
checked - The connections should have one  
pole of a different kind of clamp than  
the other so wire can only connect fan to  
run in the right direction - The fan  
should be made so it can only be put on  
shaft one way and pinned in so it can  
run as fast as it can - also the  
fan should be all mounted on one side.

The whole fan should be designed to protect  
the balance. Benjamin should make these  
have about 16 inch fan -

If it is possible keep flexible coupling  
within spinning chamber -

16 = Saw-shearing device on 3 flaps, gets loose  
- should look out for this -

17 = Not a working model - not a pinion without  
a high speed fly wheel cause a pinion  
at high speed will get away from the supports  
run up over everything = Use are going to  
Use pinion in two bearings - on one end  
pinion shaft - put a fly wheel with three  
pins, as this is high speed it need not be of  
large weight with Motor flexibly connected  
Use hope to keep ampere reasonably  
even = Use the unloading pressure  
device - otherwise burn out motor,

18 = The width of commutators on Bergman  
Motors are insufficient. They are narrowed  
to cheapen. It would be better to increase

from fifty per cent, by employing say a  
25 H.P. commutator on a 15 H.P. motor -  
or even - This brush rigging is a complete  
failure, where there is any serious jolts. =

American Street Car device best,

There is no reason why motors driving  
gearing should not be sized down, more  
or all on base, without a lot of  
and probably things only required for  
belt driving - We had quite trouble  
with base bolts shaking loose. -

Remember this as a fact, that the ordinary  
man does not set pinions on pitch line.  
Where the Construction permits adjustment  
not one motor pinion in ten is set ~~on~~

right at least they were either not on  
pitchline or one edge did all the work  
in addition the Motor moved because bolts  
got loose. In my opinion - All of the  
gearing should be framed together  
by Cast iron & assembled in the makers  
factory & delivered - then the vibrating  
structure of the Mill would not be  
serious - otherwise there is liable to  
be continuous & never ending trouble.

19 = Raw hide washers considered one of the  
the thing - they think I am going to  
test for right thing & will send you  
result -

14 = ~~162 no flimsy water starting~~  
~~cooper. have them made so they will~~  
~~stand the whole cement. for half~~  
~~an hour at least. they must be used~~  
~~which I think~~

20 = Could you have staid longer & would  
have outlined the electrical scheme  
for operating plant. 10) Starting stopping  
etc. but when you are doing above  
could not whole picture.

21 = Do not use any glass sights in water  
leveling. They will break from the jar.  
They can be a locked overflow plug. The  
Oil system management is will act to block  
will keep plenty of us —  
Dont forget that long heavy chains are  
a necessity also that one of the

Worst trouble we have on Motors is that  
the oil follows the shaft through the woods  
& comes out as lubricator. It's bad for  
Camshaft etc. and you lose oil as it  
works. It's difficult to do oil management  
to know where to get it. If this is stopped  
then it will be easy because then after  
a set one time all oil is withdrawn to  
be filtered & back oil put on. This  
would only be a question of date.

228 Keep in mind when arranging Motors &  
sprung chambers that sometimes the  
Motors must be removed or the armature  
removed in case of cross or burn out  
& want room to get out of chamber  
without tearing it down as at Stewart  
is also way to get motor in & out building  
it takes Sunday all Sunday night to remove one motor  
1200 lb stroke houses 1000 lb this

a part of the running mill it would be  
very serious.

23- The springing & bending of the fan shafts  
in the lower house, because too small is  
serious. You never expect too much damage.

24- More than - Bad foil and design of  
drinking furnace with marked dimensions -  
do not cut into the same dimensions -

E

ALL LETTERS SHOULD BE ADDRESSED:-

**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANCOLLI, LONDON.

*Standard Construction Corporation Limited.*

*Fitzalan House, Strand Street.*

*London, W.C.*

No: 18.

April 7, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

Since my arrival here last Tuesday I have been very busy going over the work that had been accomplished during my absence and am now taking up the revision of the drawings of the Fine Grinding Rolls which we discussed when I was with you in Florida.

I find that without going to a big expense it is hardly possible to make these Rolls so that we can change at will the number of sheave pulleys on the ends of the shaft. The Rolls as designed are intended for six ropes, as per your original instructions, and if we arrange these so that eight ropes can be used, you will readily see that it will necessitate a new spreader as the centers of the take off ropes on each side will be two pulleys wider and also the angle will be changed.

With the Rolls at Stewartville, supposing we have a pressure of 50 lbs. per square inch in the cylinder, there will be with eight ropes a pressure of 19400 lbs. on each end of the



T.A.E.2.

shaft; with the 10 inch cylinder, such as we have designed for Dunderland, with 80 lbs. pressure, there will be with 6 ropes a pressure of ~~226~~101 lbs. on each end of the shaft, so that we must either decide that the 6 ropes are enough or we must change to 8 ropes and keep it at that.

On the Rolls at Stewartville we have 9/16" ropes with 36" pulleys, and on these for Dunderland we can put 3/4" rope and have arranged for a 48" pulley.

I feel sure that the 6 ropes will be ample for all our needs as we can readily increase the pressure in the air cylinder if necessary, and will not make any changes on this line until I hear from you.

With reference to the enlarging of the blocks between the bottom and top girders, - would say that we had already given this matter a good deal of attention. From the rough sketch herewith you will note that in the Stewartville Rolls the distance between these supporting blocks is 11 ft. 11 3/4 in. and that the blocks are only 10" square - the top girder being secured with only one bolt passing through the center.

In making our design for the Dunderland Rolls, we have reduced the distance between the blocks to 9 ft. as you will also see on this sketch, and enlarged the size of the blocks to 18" x 15" - being 2 <sup>times</sup> 7/10 larger in area on the top and bottom surfaces than those at Stewartville. We have also arranged that these blocks shall be secured to the top and bottom girders

T.A.E,3.

with four separate bolts as well as the large center bolt; at the same time we have increased considerably the strength of the lower and upper girders and anticipate no pinching from the spring of these girders.

I think these blocks are amply large enough and strong enough for anything, and I do not want to increase them as it will interfere considerably with my design for carrying the spreader which carries the take off pulleys, and any change of design such as suggested, i.e. making the lower part of these blocks longer, will of necessity make a design for this spreader and brackets which to my mind will not be anything like as mechanical and satisfactory as the one we now have.

We have given considerable study to this matter and will shortly send you the full details and when you get them I think you will agree with me in all I have written.

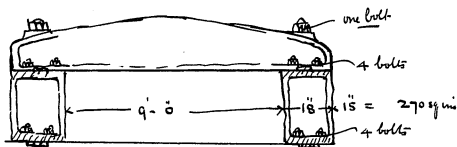
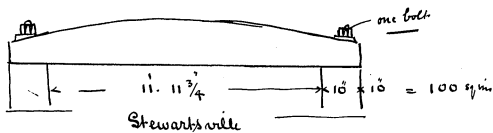
On my return here I found that everything had been going along very nicely, and about the early part of May I expect to be in Norway and commence work on the excavations, foundations, etc. for the various buildings.

Trusting you are well, I am,

Yours very truly,

Wm. Simpson

[ENCLOSURE]



*Standard Construction Corporation Limited.*

ALL LETTERS SHOULD BE ADDRESSED:-

**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANCOLLI, LONDON.

*Fitzalan House, Abchurch Lane,*

*London, W.C.*

(19) put on by  
*Hunter*

April 8, 1903.

THOMAS A. EDISON, Esq.

*Hunter*

Dear Sir,

I enclose you herewith a description of the direct connected air compressor of which I was speaking to you. I have no figures as to the cost of same but shall be pleased to get them for you at any time. Would say that the machines are well built and are giving great satisfaction wherever they are used.

Yours very truly,

*Wm. Simpson*

2 Enc.





ALL LETTERS SHOULD BE ADDRESSED:-

**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANCOLLI, LONDON.

*Standard Construction Corporation Limited.*

*Fitzalan House, Abchurch Lane.*

*London, W.C.*

No: 20.

April 9, 1903.

THOMAS A. EDISON, Esq.

*Harter*  
*Harter Cooper*  
*these with other*  
*papers in*  
*file*

Dear Sir,

Your valued favour of the 30th inst. to hand this morning and very carefully noted. I will take particular care that your suggestions are attended to and in this connection would say that a great many of them have already been taken into consideration in getting out our designs.

With reference to having some arrangement to move the shaft quickly on the Fine Grinding Rolls so as to get in the shear pins, would say that this will be accomplished very readily by our barring mechanism which it is my intention to put on the Fine Grinding Rolls as well as the crushing plant rolls.

I wrote you the other day with reference to the blocks connecting the top and bottom housings of the Fine Grinding Rolls.

I note what you say with reference to the securing of stud bolts and agree with what you say absolutely.

On all conveyor belts we have arranged to bring up the first idler next the head pulley as high as possible so as to get more surface for the belt and are using an extra heavy shaft with

the regular self-oiling bearings.

With reference to the gunny chambers for motors, would say that we have no small chambers throughout the plant. In every place where we have a motor it is in a large house which can, if we wish, be made absolutely dust proof and connected with the outer air for ventilation, so that I am not anticipating any trouble whatever from the heating or sparking of motors from dust. This large chamber or house also gives us ample room for working around the motor, removing armature, etc. This is a matter to which I have given the greatest consideration, and I think when it is your pleasure to go over the mill after it is running, you will find that all these points have been thoroughly attended to.

With reference to the electrical scheme for operating the plant, I will shortly send you a drawing giving a general lay out of the buildings and the location of each motor, so that you can advise me with reference to the wiring, starting, stopping, etc.

I have been trying thin copper washers in place of the raw hide and they are a success. I wish you would try a few up at Stewartsville in the worst possible places and let me know the result.

I note particularly what you say with reference to the setting of the motors, etc. and it coincides exactly with what I am going to do; and another thing, particular attention will



3.

be paid in the putting in position and securing the motors so that there should be no trouble from getting out of line.

We are just working on the fans for the blower houses and I am pleased to get your note as to the strength of the fan shafts.

With reference to the drawings for the briquetting furnaces, I have been asked by "the powers that be" over here to hold up on this matter for the present.

Yours very truly,

Wm. Sampson

[APRIL 18, 1903]

Simpkin - London

What number is this  
Letter put it in  
So that we know he is in  
get them all

I am preparing for you full inspection  
report and other records hope to send you soon  
as well as other things I have found wrong  
when taken apart. Will send as soon as  
ready. Several very bad things have  
developed which I did not know of &  
which is going to be very serious for us  
immediately. 1st The shafts of <sup>one</sup> Blowers  
are ~~1/4~~ fifteen sixteenths dia & supported several  
feet apart. They have bent so bad that we  
shall take all apart and put in four inch  
shafts which is none too large for the distance.  
They not only have bent but the packing collar  
have cut them very deeply by the wobble.  
Second The ~~Motor and~~ space for motor was  
so small that gunny chambers were no good  
as they couldn't be made ~~any~~ any larger than  
the motors. Result was that they worked in thick

dust the dust burnt in Commutators & the  
latter are worn out & motors were also

There was such a terrible Congestion & lack of any  
space that nothing could be practically  
done to over them. ~~I have got to remove the~~  
~~the Blower plant, Had we had a little more room~~  
~~Everything would have been good~~

I am compelled to use a sprocket & put motors between  
roller feed & Blowers this permits all Motors being  
in one long Continuous gummy Chamber,  
with side doors so motor can be removed & taken  
between the dust bins & around the back of  
same.

Second All the pinions & of course the  
gears of drives on Conveyors are too small  
They are ample for strength but the pressure  
per square inch is such that the heavy  
loaded Conveyors have teeth worn out  
hind the way through. Consequently the vibration  
gets so great that towards end of run the  
Brushes could not be kept on the Commutators

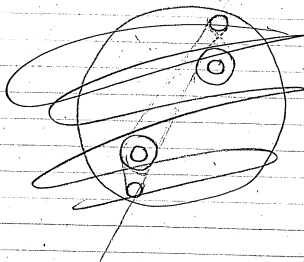
The jumping of the brushes produce sparks  
 & these heated commutator so that the maximum  
 Capacity of a 25 HP motor got reduced to  
 twelve then they had shut parts well down  
 to Cool. On top of Rock stock the shaking  
 of the structure was terrible & they had got  
 out plans to belt down to a motor at the South.  
 I put in wider gears with pinion between bearings  
 put in new flexible Coupling - & we have  
 been running Mixing belt for several days.  
 The motor is repaired to full Capacity it has  
 neither spark or jar & the structure only receives  
 a small jar from the wear on the other pinion  
 & this would go out if it had been wider -

~~It is a problem~~ How long before you will send  
 me drawings so I can put on the final OR  
 Havnt need a single one that is final as yet.  
 Are you sure that you have enough men in  
 your draughting Dept, I fear you are going

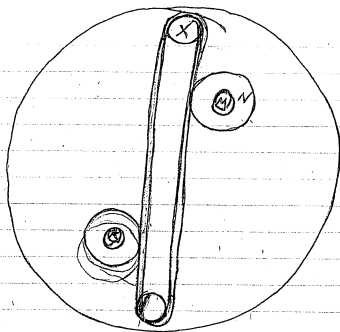
4

to get into a hole before long—

It may be possible that the Motors on the  
3 High and Crushing plant rolls will  
need flexibles between gearing & shafting  
to prevent sharp vibration waves dancing  
the brushes. ~~to~~ We have tried several  
flexibles on our smaller Motors & have one  
that works perfect. it works so perfect we  
are making one for the third 36 inch Roll.  
on Motors it is made thus

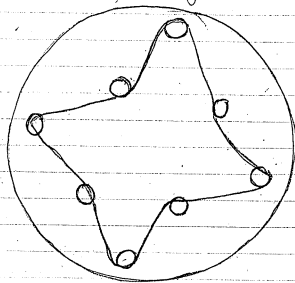


5-



Sixteen diameters, inch quarter pin X - Wheel  
 N is two half inches - pin M inch quarter -  
 The belt is double & stretched all around  
 Edges by harness makes the width on  
 25 Horses power is two & half inches -  
 The disks are turned all over & balanced  
 When shafts out true the wheels run up &  
 down belt & hence the easier they run

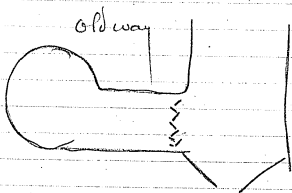
up & down the less does the vibration wave go to water, with the one now generally used there is considerable vibration transmitted & it is very unsatisfactory. The following is generally used in this country. It does not slide easy enough—



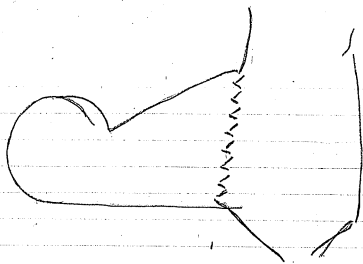
7

I have Barnes here Experimenting on  
 gunny chambers & we will soon  
 be ready to give you full data,

Could you arrange Blowers so there is a  
 greater height for baffle plates it would  
 greatly improve them,







New way —

# There is a great difficulty in making a motor pinion gear casing and bearings so oil in casing will oil bearings. Look out for this —

We are changing Exhauster from top of Dryer to Earth on Concrete across the incline & running a Downcomer pipe from top Dryer to Exhauster, putting in a Cyclone dust collector

and by use of a 12 inch screw at  
bottom clean out dust catcher  
at intervals + depositing it on 102  
Conveyor — The Congestion, heat +  
vibration was loud at top of Dryer —

We have trouble with bottom belts  
of Conveyors running to one side also  
getting under edge of side chilled rollers  
+ ripping off the rubber the whole length  
of the belt — The rollers should extend  
way down close to base + also be  
higher + be every 50 ft apart on  
bottom or return side. The top we have  
very little trouble with,

Edison

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

*Standard Construction Corporation Limited.*

*Fitzalan House, Strand Street.*

*London, W.C.*

No: 21.

April 22, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

We are mailing you under separate cover a complete set of drawings for the Fine Grinding Rolls which have been carefully gone over since my return from the States, and in which you will see that we have incorporated the suggestions made by you. In this connection I would call your special attention to my letter to you of the 7th inst. with reference to the various points we had discussed.

We have not yet received final bids on these rolls from the various parties to whom we have sent the drawings, but from what we have received I feel certain that they can be bought for **5** cents per lb.

We also mail you drawings showing the lower set of 5 ft., that is, the spring rolls, and you will find on these that we have increased the length of the tension rods which go through the two bearing housings as suggested by you, making them long enough to get in six  $1\frac{1}{4}$ " white pine washers, putting three

on each side or putting them all on one side as may be found most advantageous.

You will please note the change also with reference to the wobbler, the part that is keyed on to the end of the moving roll being turned down so that we can draw out the bearing bushing without being obliged to take off the wobbler end, as this end will be put on with a good press fit. You will notice the groove also turned in this wobbler end and this is to be used in clamping on a pair of clips when it becomes necessary to take off this casting.

We have not yet completed the drawings for the hoppers of the crusher plant embodying your latest suggestions, but have them well under way and will forward them to you shortly. I have no idea as yet how much this work will cost but will let you know after we send out the drawings.

When in the States I gave you the price at which we had contracted out the Giant Rolls, the 5 ft. rolls and the chilled plates. The Giant rolls cost 4.08 cents per lb.

The 5 ft. Rolls " 4.18 " " " "

The chilled plates " 2½ " " " "

I will have complete statements made for you from time to time giving the exact weights of each machine, etc. and the exact costs of same.

With reference to an elastic coupling, I am going to investigate one of which I have heard and of which I am told there

are over 200,000 HP. in operation varying in size from 5 to 500 HP. and which are being used for all sorts of intermittent and steady work. When I have found out just what this coupling is and have seen them actually at work, I will make and send you an understandable drawing.

I have had made and am now testing some sample idler bearings - one of which I will shortly send you just so soon as my tests are completed. We think they are first class as they embody the best features of our old idler bearings and many new features which make them much more mechanical and much more satisfactory.

Yours very truly,

Wm. Simpson

Letter 14<sup>5</sup>

Dumplings -

April 23/13

Look out for plenty of <sup>sag</sup> ~~sag~~ on conveying belts at driving end. We have had endless trouble here with starting belts loaded when mill suddenly shuts down - When we start with load on the sag becomes very great because the belt is not pulled around tail pulley in time, The Belt then strikes different things, some of which are parts of the building & cannot be removed. The result is that we have all kinds of devices to obviate it, & in some of the belts nothing can be done except unload the belt, which takes time. You can avoid this in your original design - We want <sup>space</sup> ~~space~~ for room for a big sag so we do not have to continually take up the belt. These big belts if yours will want 40 ft ~~or~~ slack at least.

Regarding the pump & <sup>gear</sup> ~~gear~~ of motor drive on Conveyors - after running the new one for a

week on 104 mixing belt night & day with heavy load. We are compelled to abandon ~~the design~~ as it is now arranged that is with pinion underneath as we have no room to put a self-aligning bearing & also because we can never be satisfied ~~with~~ that the pinion is on pitch line. We are designing it so pinion is on the side and the width of pinion is to be 10 inches. The  $4\frac{1}{2}$  width new pinion after the cracks crack being so even that the jaw had become serious. There is 900 pounds pressure on tooth.

When you receive this letter kindly acknowledge that you have received my letter #18 dated April 23-1902 and oblige.

[APRIL 24, 1903]

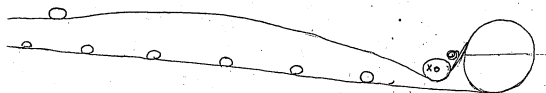
Simpkins -

London

(No 19 & think  
Date it)

WE have now got the right  
thing to get bite on Conveyor belts  
~~staples~~ on Conveyor 104. with  
275 tons we can start the loaded -  
belt, from a state of rest, I have a  
double shift running the moving  
belts night & day so as to settle  
once for all the flexible motor,  
gears and bite of the belt,  
The plan is thus





X is the regular sized idler but with the heavy shaft. - The reason the grip on drive pulley is great is that the increasing arc increases grip in a far greater ratio than lengthening the space of free belt. The bearings run worn on the idler and the small diameter is severe on the rubber sides. We are making a 20 inch idler with the smallest of our regular self oiling bearings.

Edison

[ATTACHMENT]

#19.  
An. Sept.

Wm. S. Phelps

I will sign as  
reading

From prints of the ~~the~~ fine  
~~big~~ rolls I have just gone over, I find  
some of the suggestions I have made in  
my letter have not been followed out, and I  
fear you may not have received <sup>some</sup> of  
them, as I have ~~not~~ had copies made  
of each letter, which <sup>now</sup> send you under  
registered mail; - and I <sup>trust</sup> ~~hope~~ that you will  
hereafter acknowledge receipt of each letter I  
may write you.

*Standard Construction Corporation Limited.*

ALL LETTERS SHOULD BE ADDRESSED:-

**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANCOLLI, LONDON.

*Fitzalan House, Arundel Street,*

*London, W.C.*

No: 22.

May 2, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

No: 17.

I have your favour of the 18th inst. and note that you are preparing for me a full inspector's report and other records. I am not surprised at the trouble you have had with the shafts of the blowers; if I remember rightly, the bearings are about 10'6" apart and the speed of the blowers has been almost doubled from what it was originally intended to be. I have been working for some time on the drawings for our blowers and shall shortly send them to you and you will find that the bearings are about 7'10" apart, and the shafts 3 15/16, whilst an ample baffle arrangement is provided with an adequate fall for the material on to the first plate.

With reference to the gunny chambers, would say that in the Dunderland plant we shall not have any small gunny chambers. In every case where we have a motor, I have a large room varying in size according to the motor from 1500 to 3000 cubic feet, with plenty of room to get around and in every case arranged for free access of air from the outside. I have given this matter very

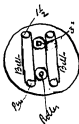
particular attention and as I am working out the designs under somewhat more advantageous conditions than with the Cement Mill I am able to arrange this work in a better manner.

With reference to the gears, I recollect that the face of the pinions on all motors driving conveyors on the Cement Plant is 4 1/2"; with the Dunderland, all motors up to 30 HP. will have pinions 6" face, and those of 60 HP. 12" face which I consider very ample.

I do not anticipate any great vibration where we have to place motors in the roofs of the buildings as the whole of the structural work is at least 33 1/3 per cent heavier than at Stewartsville and besides being strengthened and specially braced where motors are carried; besides this, there will not be a single over-hanging gear in the whole of the plant.

With reference to the flexible couplings, I am sure we shall have to use one in connection with the 5 ft. crushing rolls and the Fine Grinding Rolls, and I shall look around and see the many that are in use here and on the Continent and pick out the one I consider best, as our Directors do not think it advisable to use anything but standard well tried machines where we can do so.

I note your sketch of the flexible coupling and would say that I have seen one very similar at work here, but with this exception, that instead of the two rollers working against the outside of the tightened belt, they work between two belts, and this prevents them from getting away from their contact if there



should be a sudden stoppage of machinery, which you will see is decidedly an improvement.

I shall shortly send you the drawings of the whole of the hoppers, etc. in the crushing plant, blowers, etc.

With reference to men, would say that I have as many at work as can be profitably employed and have no fear of "getting into a hole" either mechanically or otherwise.

I note that you are changing your exhauster from the top of the dryer to the ground. It may possibly be well for me to do this and I will look into it, but as I have so much more room and a so much stronger building, it may not be necessary.

I had already made a note when with you in Florida as to the running to one side of the lower belts and have arranged to put the idler pulleys every 50 feet.

I have some of the bearings for the conveyor idlers now at work testing them, and so far as we can see, they are simply perfect. I shall shortly pack up one of these and send it to you for your criticism.

It may be interesting to you to know that we are about acquiring the lease of a piece of land and several buildings where we intend to establish a laboratory with crushing, screening, blowing and separating machinery, so that practical tests can be made of any ores, etc. coming in.

Trusting you are well, I am,

Yours most sincerely,

Wm. Sampson

*Standard Construction Corporation Limited.*

ALL LETTERS SHOULD BE ADDRESSED:-

**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANCOLLI, LONDON.

*Fitzalan House, Strand Street.*

*London, W.C.*

May 5, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

I have your two favours of the 23rd ult. - one No: 18 and one without a number - and also your favour of the 24th ult. No: 19, contents of which I have carefully noted.

It seems to me as if we had anticipated you somewhat and I am very glad to know from your No: 19 that the increasing arc increases the grip on the head pulleys in much greater ratio than length in the space of the free belt. We made up our minds as to this some time ago and I mailed you a little pencil sketch showing my ideas. Whilst working out the structural details we have been working in these belts and started to use not less than 25' of free belt on our short 24" conveyor belts - increasing this length with the increasing length of belt so that we have as much as 30' in some of our belts. I enclose you a little tracing, copied from the one mailed to you before, in which you will see that we have arranged our first pulley carrying the lower belt next to the head pulley to be 18" in diameter in all cases and to be got up in such a position as to

T.A.E.2

give the greatest amount of contact between belt and pulley. For these 18" pulleys we are using 1 15/16 shafts and self-oiling bearings. I can however make these pulleys 20" if you think it preferable.

In my last letter I wrote you what we were doing as to the face of our gearing driving the conveyors, and from this you will see that we have also taken care to have a good width of teeth in every case.

I have received all your letters from one up to this which I am now replying to, both numbered and unnumbered, as per your list, and I see from my letter book that I have replied to all of these as well as writing you on numerous other occasions.

I have been looking at some conveyor work over here more particularly with reference to the unloading and handling of our coal, and I think if you will send to the "Steel Cable Engineering Co., 92, States Street, Boston" for one of their catalogues, you will find illustrated on page 13 a very good arrangement for a scraper conveyor wherein steel ropes and dust proof wheels are used. I call your attention to this, not that we are contemplating using anything of this kind but merely as a matter of interest.

Yours very truly,

Wm. Simpson



[MAY 11, 1903]

The Dundonald Iron Works Co -

Gentlemen

I have received complete Drawings for the fine Crushing Rolls of the Dundonald Mill and approve of the same if alterations are made as to foundation and other details, ~~It would be well~~ as per memorandum below - These alterations are the result of actual experience obtained on the same character of Rolls at the Cement plant please acknowledge receipt of this letter

~~It~~ I would like the final drawings with alterations made for filing away for future reference -

Memorandum

B-187 There should not be more than ~~one~~ one eighth of an inch between the plates one quarter of an inch is too much - The edges of the plates, that is the last corrugation will cause edge to chip off, sometimes this chip will be several inches long and one to one

2

and a half inch deep we leave off the corrugation at the edge so the ore cannot get hold of it to break the edge. Thus.

Leave space 3 inches long here

B-180 = Tap bolts all shake loose, the wire does not lock them, it merely prevents screws from being lost, the only way to lock them is by fitting sheet iron links from head to head & then use the wire. Thus—

Leave 3 inches space

Regarding the nuts on bolts the same objection to the wire holds. The Millions of sharp concussions received daily shakes every nut loose. Instead of a hole put in a slot extending down under head of nut & drive a taper sheet cutter in & bend over - the taper should not be too great & the thickness of the steel ~~can~~ considerable. This is quite a little job which can be done on final assembling but it is essential.

The oil drain at bottom should only have a pipe long enough to fasten the rubber pipe to, and the same should be locked - A long pipe breaks by momentum.

B-181 is all right.

\*  
\* B-182 Putting Exhaust Collar on both ends necessitates precautions against Canting of Rolls which will produce a pinch - The precautions are that the ore shall be fed to the rolls evenly and that no segregation of ore take

4

place, that is to say that coarse ore will not go down the chute to rolls on one side and fine ore on the other. Otherwise 182 is all right.

B-183 - All right except locking with slot & taper Cutter which applies to the whole Roll. except perhaps the large Housing Galls at end which may be locked in another manner.

B-184. I am doubtful if we do not still need the key across the ways to hold the fixed shaft bearings in place, if it gets out of line with drive shaft there will be trouble. The concussions will strain tapered Belts and draw the reamed Belts. We have roll plate Galls on Regular rolls drawn so much that we couldn't get them out. It is almost incredible but nevertheless true.

B-253 - I have never yet used in a roll anything but a hammered iron shaft, & this under the <sup>Steel</sup> advice of John Fritz of the Bethlehem Iron Co. I therefore advise hammered iron shafts not that mild steel is not strong enough usually but on account of gradual crystallization under powerful and / exceedingly minute concussive strains.

Coupling on main shaft will slip no matter if it is forced on. There should be a countersunk plate & bolts.

We have had serious trouble with ours here and even after riveting it has started the riveting. It is difficult to see where this thrust comes from but it is there and is very powerful. Otherwise

B-253 OK -

B-254 All right, look out for warping after finishing. Our ways here sprung one sixteenth of an inch so Roll had to be dismantled & re-placed to prevent bearings pinching on the ways.

B-255 all right

B-256 all right.

B-257 Grooves after machining should be polished

Note - The standard outside the roll for internal  
oring through long shaft should not be put on  
board floor but on steel beam or foundation to  
prevent jam -

B-258 The shaft cover plate will leak oil  
with<sup>out</sup> lead or other packing

B-259 all right

B-260 all right

B-261 all right

B-262 Flexible coupling to motor

B-263 Must be a good job or it will be  
sure to leak - use used drawing paper in joints

B-264 We had to increase diameter of shear bush to two inches as compression hammered the socket oblong when we had a smaller diameter and steel will be worse as it can flow. Should advise two inches as minimum with perfect fit. It is extremely essential ~~that~~ If you want to get a high average run each day that the shearing device should be made by the best toolmaker obtainable that the bushes should not be tempered too soft so edges will get rounded or too hard so they will crumble and the faces of the shear bushes should be perfectly flush with the plate & come perfectly together so that a perfect shearing device is had, then there will be no trouble. Are you satisfied that you have room enough between gear casing & shear to get the stub sheared bolt out easily. My experience is that the workmen never realizes how good a job this shear device must be & we then as a rule have to make it all over again -

~~267~~ The taper pin to bring shear plates together has proved a failure here, gets all battered up & on two occasions men forget to take the pin out - we use a mark

The shear pin clamp has also proved bad the sharp edge of the slot causes it to act as a pipe tap, we have rounded the edges of slot but its not ideal -

Regarding the gears the strength is all right but the pressure is very heavy for a 200 HP rate the pressure is 2100 pounds for driving & double this for shearing - It is not a question of strength so much as wearing surfaces.

If gears were theoretically perfect & we always got rolling friction etc it might be all right but we don't get it. ~~The~~ The speed & pressure here are very great and the wear will be proportionally great, another thing is that we have cast gears.

The gears should have a minimum face of not less than sixteen inches & I believe



Eighteen inches would be much better, they may look strange but that is no reason they should not be used. The gear body could even be lightened because its not a question of strength so much as wearing surface.

On the Spring rolls only a small part of the work or stress goes through the gears. Both rolls are practically driven direct through the medium of the ore, the gears preventing slip & consequently wear on the plates, and in the case of the regular rolls without springs the gears do not transmit one quarter of the stress & besides require very much less power, but on the fine grinding rolls the whole of a great power goes wholly through the gears. hence the gears should be all out of proportion to the gears above mentioned. You can make no mistake by using an 18 inch gear & in my opinion make a serious one by using 12 inch -

The jar of these gears makes it absolutely imperative that a flexible be interposed between the motor & the drive otherwise the jump of the brushes and sparking will be prohibitory.

B-265 I recommend the use of a regular Engine piston & snap ring. The relief hole at tail end should be reduced to half inch - provide a steam pipe in contact with cylinder to prevent freezing in the center -

B. 266 & 267 - It is very desirable that ropes already spliced shall be in readiness, it is difficult for men to splice in mill & desirable that it be done outside or brought in - with the tightener. Regging it will be difficult to do it without you make a change. There

The position of your tightener does not permit of a clear separate room etc but I suppose you contemplate making the room so the

air cylinders will be in motor room & the  
ways are roll room - The It will not do to  
have ropes run into motor room unprotected  
as the air movement due to moving rope brings  
in lots of dust. You cannot be too particular  
with this partition to keep out dust. We use matched  
pine then cover with ten cent canvas & paint  
the Canvas.

Will not your rope strike foundation when  
starting up. -

B - 169 all right

B - 176 all right

C - 116 These rolls should be made solid  
there is nothing gained by hollowing out  
& there is a real danger from chipping off  
edge for the reason that sometimes the  
rolls will Cant,

C-139 — C-140 Is decidedly objectionable. The Conner's throw of the housing will not be less than one sixteenth of an inch & sometimes more. The gear bearings would not work at all. You should have cast iron girders at least thirty six inches wide well ribbed up in direction of throw and about two foot deep at the foundation & ~~and~~ somewhat bellied in middle have a foot on the girder where it rests on the foundation say four feet wide & well secured by bolts to a very massive foundation the greater the mass the better. If this is done the housing throw may be reduced down perhaps to one sixty fourth of an inch & your gear bearings will work all right. No one can realize what these throws are until he sees the rolls doing work —

C-141 all right

C-142 all right except as to width

C-143 Forced coupling uncertain advise  
needed plate & bolts - Water shaft has  
flexible.

C-144 All right -

B-175 All right - except that you may have  
trouble in getting out plate bolts; they will be  
thrown - Mandril will move & advise pinning  
in addition -

B-186 - all right -

Yours very truly

*"Copy"*

Letter No. 19.  
William Simpkin, Esq.,  
London, England.

May 11, 1903.

Dear Sir:

From the prints of the five rolls I have just gone over, I find some of the suggestions I have made in my letters have not been followed out, and I fear you may not have received some of them, so I have had copies made of each letter, which now send you under registered mail, and I beg to ask that you will hereafter acknowledge receipt of each letter I may write you.

Please note that the suggestions made are the results of the actual experience we have had and are having at the Cement Wks., and I fully believe if they are carefully considered will save your company from the loss of considerable time and money when you start in operation.

Yours truly,

*Edison*

Number the Litter #20

May 15 1903

Simpkins -

I do not remember that I told you  
how we finally arranged our Motors for  
driving the Blowers - We have it as in  
Sketch A01 \*

We use wooden wheels 18 inches on  
Motor drives and 36 inch on Blowers  
shaft, 45 degree grooves and <sup>one</sup> inch  
rope - This gives us a maximum speed  
of 200 Revolutions & for slowing it down  
we put a Regulating Resistance in the  
Main line leading to all the armatures  
with Blowers it regulates all right  
which is not the case in any other  
instance, probably because there is  
no friction load - <sup>or with friction</sup> With very dry ore  
it requires 160 with wet ore 200 Rev  
The bite of the rope in the grooves is so  
great that it will ~~not~~ <sup>smoke</sup> a block of

See sketch A01 for details

wood held on 36 inch wood wheel at  
the rim without varying the speed —

We make a Concrete foundation ~~on~~ two  
first deep 18 inches below earth floor &  
6 inches above as per sketch NO 2

This foundation reaches from one motor  
to the other two motors being included  
in one gummy chamber =

We use self-oiled bearings & the ~~size~~ 16 inch  
wheel & bearings are outside of gummy  
chamber, where shaft goes through  
there is a loose wool packing see sketch  
NO 3

The door is self closing  
having a weight on end of each cord  
but connected to cord through a spiral  
spring to take mass shock off =  
Cord runs over single sheave block

The door has weather proof strips  
being a rubber tube it closes it perfect <sup>indep.</sup>  
door has stood 7500 full openings



+ at end of Experiment was light as  
all right - We use hard wood around  
doors - Also we use three thickness  
of gunny for Chamber + single thickness  
for the outside. The 3 thickness are put  
together. We had to do it as the float  
came through + makes bad motor sparking  
slugging in the Commutator by making  
Chamber larger its all right.

We use a vestibule where we can  
to prevent dust getting in when  
Inspectors comes in - ~~The~~ The roof  
is of matched pine then covered  
with Canvas + painted -

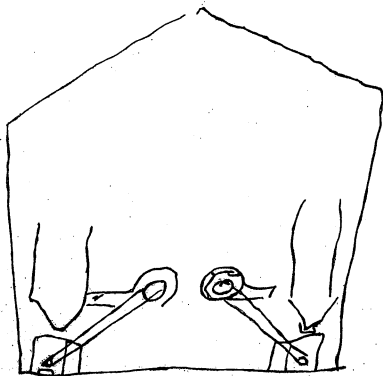
They are very substantial + perfect in  
Every respect. We have now a  
perfect brush holder + Carbon.  
Bergmans brush holder was a bad  
failure + the Carbons he told us  
to use were no good - We are getting  
low heat results below what he even

4

Claims - I have sent official approval of fine grinding & springing Rollers to the Co for record. There are some few changes that should be made. I will send you a pinion from 25-HP Motor on Conveyor which has run 43 days. You will see how inadequate the wearing surface of such a pinion is for that amount of power. We are cutting all ours Eight inches for 25 HP & 12 for 50 HP. We put pinions on side of gears & raise all motors up using a small A frame for pinion shaft which has self oiled bearings - This gives us a good Cast iron Casing where we can use Crusher Oil. We are changing 34 drives this way - ~~Comp~~ -

Edison

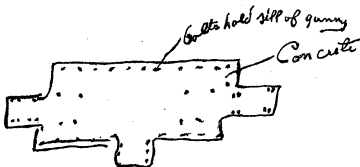
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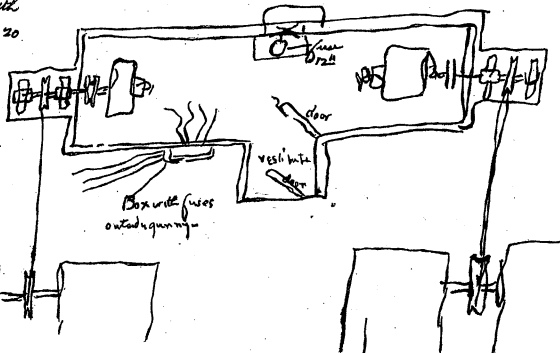
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N02

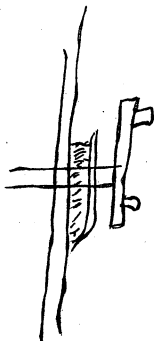


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N03



"Copy"

May 18, 1903.

Dunderland Iron Ore Co.,  
Fitzalan House, Arundel St.,  
London, England.

Gentlemen:

I have received the drawings for the five foot spring rolls and approve of the same if the alterations suggested are made as per following memorandum.

Memorandum.

B.230. The throw of this roll will be tremendous on account of its weight; the girder is entirely inadequate as I have stated in two of my previous letters. I am very sorry that you couldn't have seen our 36 Roll in operation, you would realize what I mean by entirely inadequate. We have now put all our supporting beams in solid concrete. This of course will do away with the elasticity of the beams which tends to save the pound of the housing. It will now be very severe and we intend to put about one inch of rubber in for the bearings to strike against, protecting the rubber from oil as far as possible. I advise that you change your girder to a box girder.

B-127. B-211. Our filter oil cup with the gauze wire filter is very successful but the concussions broke the cup off and also the gauze cup being only soldered at the top broke off by momentum on stopping and we had to take cups off of bearing of rolls and connect by a

#3 D. I. O:Co.

rubber tube. This is very undesirable and defeats the object of the cup, which was to forever insure the bearing against grit getting in, as the men disconnect the tube and leave it open for grit to fall down from floor above and get into the bearing. I have a new cup in which the gauze cup is supported at top and bottom and the cup itself is supported by an iron frame bolted to bearings. If you put the oil cup on top of the tube on B-127, it will break off within an hour without it is braced at the top. What is wanted is the gauze filter cup inside and a part of the bearing. The gauze cup being supported at top where it is soldered and at the bottom. Could you not put filter in cup on B-127 and still have it convenient?

B-232. There should be a flexible inserted between motor and roll drive on account of the inevitable throw of the housing and rolls on even the strongest box girder, the shafts having no wobblers will not work, it will heat up badly. To stop this you will have to use the wobbler on both shafts. If the throw at the rolls and drive gear supports could be made the same, possibly the second wobbler would not be needed, but I think this is impossible.

B-173. Think shear bush should have a minimum diameter for the reason given on report of fine grinding roll. We use for shearing pin on our 36 Rolls nine sixteenths, so you better start with this size. How about room between gear casing and shear disk to get your shear pins out. Same trouble with shear pin clamp as reported on fine grinding roll. Grease cup for oiling gear will jar off if not fastened well.

B-169. O. K.

B-196. O. K.

#3 D.I.O.Co.

B-195 O.K.

B-197. O. K. except roll extension shaft ought to be changed to wobbler connection for reasons mentioned.

B233. B-234. Will the end chuck hold on the roll shaft without backing off, regarding this form of wobbler if it <sup>is</sup> proportioned right I suppose it will do the business.

B-172. O. K. Joints should be packed with paper or equivalent.

C-115. O. K.

C-133. Use pine instead of maple. Have spoken of this in three different letters, which makes me think you must have missed some of the letters. See remarks about block of rubber to take shock in addition. Otherwise O. K.

C-120. O. K.

C-121. O. K.

C-116. O. K.

C-132. O. K.

C-115. The plug hole useless set by a mark. See report on fine grinder. Start the shear pin nine sixteenths. Otherwise O. K.

C-134. O. K.

C-112. O. K.

What is object of having the key seat in bottom of all the bearings 3 inches by 5/8.



#4 D. I. O. Co.

B-128 O. K.

B-328 O. K.

B-129 O. K.

B-130 O. K.

B-212 O. K.

B-229 O. K.

B231 O. K. except regarding safety of the forced coupling for  
wobbler.

B-227. O. K.

B-232 O. K.

B-195 O. K.

Same remarks about locking of stud bolts as given in report  
on fine grinding roll.

Yours truly,

*Thomas A. Elson*

ALL LETTERS SHOULD BE ADDRESSED:

**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANCOLI, LONDON.

*Standard Construction Corporation Limited.*

*Fitzalan House, Strand Street.*

*London, W.C.*

No: 24.

May 19, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

Acknowledging your letter No: 19 of May 11th (I also received a No: 19 of April 24th) would say that I am going carefully over your previous letters, all of which I have received as per my letter No: 23 of May 5th, as I am under the impression that we have carried out all the suggestions which you have made which are pertinent to our work.

The fact is that we are not doing a single thing without giving it the fullest consideration from every point of view and taking advantage in every way of all the suggestions which you from time to time have so kindly given us.

Also we are watching carefully the manufacture of every piece of machinery and shall continue to do so, as we wish to have this plant erected in a thoroughly mechanical manner so as to obviate as much as possible any trouble except what one always has with the starting up of a new concern.

2.

I am going over to Norway in the course of a few days  
so as to see what can be done as to preparing for our excavations  
and foundations, and will write you fully on my return.

Yours very truly,

Wm. Simpson

W.  
*Standard Construction Corporation Limited.*

FITZALAN HOUSE, ARUNDEL STREET,  
*Amberley House, Norfolk Street*

TELEGRAPHIC ADDRESS:  
"STANCOLLI, LONDON."

*London, W.C.*

20th May 1903.

Mr Thomas A. Edison,

Edison Laboratory,

Orange, NEW JERSEY, U.S.A.

Dear Sir,

The Dunderland Iron Ore Company have handed us a  
letter addressed by you to them, dated the 11th May, on the  
subject of certain of the Dunderland mill drawings.

We thank you for your valued observations, and  
have requested Mr Simpkin to reply to your letter on its  
technical features.

Yours faithfully.

STANDARD CONSTRUCTION CORPORATION LTD.,

*W. H. B.*

Secretary.

*Standard Construction Corporation Limited,*

ALL LETTERS SHOULD BE ADDRESSED:-

**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANCOLLI, LONDON.

*Fitzalan House, Arundel Street,*

*London, W.C.*

No: 25.

May 20, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

*file*

Your favour of the 11th inst. with reference to the Fine Grinding Rolls (which you evidently addressed to the Dunderland Iron Ore Co. in error) has been handed to me and carefully noted in every instance.

Final drawings will be sent to you for filing, as requested. In this connection would say that I have decided wherever it is possible to use solid forged couplings so that there can be no possibility of slipping.

Yours very truly,

*Wm Simpson*

*Standard Construction Corporation Limited.*

ALL LETTERS SHOULD BE ADDRESSED:-

**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANGOLLI, LONDON.

*Fitzalan House, Strand Street.*

*London, W.C.*

No: 26.

May 22, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

Herewith please find print A.172 which is a skeleton drawing of the bin below the Giant crushers as far as the first set of rolls - changed in every way according to our conversation when I was in Florida. The details we will send you later after they are completed.

Yours very truly,

*Wm. Simpson*

*Standard Construction Corporation Limited.*  
*Fitzalan House, Arundel Street.*  
*London, W.C.*

ALL LETTERS SHOULD BE ADDRESSED:-  
**ENGINEERING DEPARTMENT.**  
TELEGRAMS: STANCOLLI, LONDON.

No: 28.

September 4, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

Since my return from Norway, and later from Stockholm where I was sent by the Dunderland Iron Ore Co. to join Mr. Ballantine and Prof. Louis in an investigation of the Grondal furnace, - this is the first opportunity I have had to get together and mail you a lot of prints.

Before leaving for Norway I sent you a skeleton drawing of the bin, etc. underneath the giant rolls in which I embodied all the changes and suggestions which were talked over whilst I was with you in Florida.

I am now sending you the details as follows:-

A. 172. 176.

B. 269, 270, 289, 290, 291, 292, 293, 297, 299, 300,  
301, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 316,  
317, 318, 319, 320,

C. 135, 316, 137, 146.  
in all 33 sheets.

Crusher piers, A. 160.

T.A.E.2.

Drawings screens, etc. A.124, 149, 150, 174, 175, 177.

B. 203, 204, 205, 206, 207, 208, 209, 210, 277, 278,  
279, 280, 281, 315, 321.

Drawings of Blowers - A.178, 179. B.322, 330.

Diagrams of general lay out, and also of all the  
buildings, head and tail pulleys, etc. -

A. 125, 126, 131, 132, 133, 134, 135, 137, 138, 139,  
140, 141, 153, 180.

B. 217, 218, 219, 220, 221, 222, 223, 224, 225, 226,  
235, 240.

Also drawing A.193 which is the skip for carrying up  
ore: B.342, the skip car.

✓  
With reference to this skip, you will note that I have  
drawn it out somewhat lighter than we had talked about as I  
have seen some skip cars almost similar in design and they are  
lined on the sides and bottom with  $1\frac{1}{2}$ " hard wood planks which add  
very considerably to the life of the car.

Awaiting your favours, I am,

Yours most truly,

Wm. Simpson

The blower matter was thoroughly gone into with Ballantine, who  
made a lot of experiments at Orange, & we are continuing these  
here. S.



*Standard Construction Corporation Limited.*

*Fitzalan House, Avondale Street,*

ENGINEERING DEPARTMENT.

TELEGRAPHIC ADDRESS,  
"STANDOLLI-LONDON"

*London, W.C.*

Sept 8. 03

Dear Mr. Randolph

Thank you very  
much for your letter about Mr.  
Edison's eyes. I am writing him  
quite an epistle which goes by  
this mail - kindly see it reaches  
him & if he is at Stewartsville  
please forward it & greatly  
oblige. With my best wishes.

Yours most truly  
Wm. Simpkin

*Standard Construction Corporation Limited.*

ALL LETTERS SHOULD BE ADDRESSED:-

**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANCOLI, LONDON.

*Fitzalan House, Arundel Street,*

*London, W.C.*

Sept 8.03.

Dear Mr. Edison

Mr. Rhodes has just been in and shown me a letter from you. I thank you very much for your kindly words, but for the life of me I cannot understand your apparent lack of confidence in my ability to carry out this work to a successful issue. Since I have been here I have had but one purpose in view - to carry out your wishes with regard to this Plant and to make it a success. Since the days we first laid out the preliminary drawings and decided on the general arrangement, up to this moment, not a thing has been changed by me where any principle of your system is involved and I have taken particular pains to embody your suggestions. It has been my constant study to keep it an absolutely "Edison" plant & I have refrained from and argued against any attempt to have introduced modifications suggested by others. In fact at times I have had to be very stubborn & unpleasant. In a score of letters I could not begin to tell you how I have had to stand up against "Boulton & Thomass" & on behalf of you & your system. Confidence begets confidence" and just when I had the biggest doubt

*Standard Construction Corporation Limited.*

ALL LETTERS SHOULD BE ADDRESSED:-

**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANCOLLI, LONDON.

*Fitzalan House, Arundel Street.*

*London, W.C.*

full into line, here comes a letter from you, throwing doubts on the very one that did you know all which has taken place since my arrival here - you ought to stand by. You said "stick by me + I will stick by you" + this I have faithfully done + am doing. You seem to think I have had no experience in crushing &c. I have never claimed any experience of your system other than that gained whilst with you, but I think to-day I possibly know more of it than anyone else outside of yourself. That I have a good knowledge of and had a considerable experience in both crushing, fine grinding, screening + conveying goes without saying + I can point with pride to several plants which to day are successfully working. On my return to this country after an absence of over twenty years I went to see a large elevating + conveying plant designed + erected by me, and which is still doing good work. I feel that I am able to hold my own with most engineers in this particular line + I know I have had an experience, always practical, second to none. I cannot at all understand how it comes you have not in your possession a set of the Giant Roll drawings, as my mailing clerk's book shows they were sent to you,

*Standard Construction Corporation Limited.*

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

*Fitzalan House, Arundel Street,*

*London, W.C.*

Besides this we discussed a many features of them when I was in Florida, going into prices &c. which I confirmed by letter to you on my return here - Ap. 22.08. However I will at once have another set of prints made & mailed to you. I did not send you the Dryer drawings as they were all made before I left the Laboratory and are an exact copy of that at Stewartsville - as also the Distributor - care having however been taken to shorten each screen plate & to put in plates instead of angles at the lower end of each screen plate, as per your wishes, and as seen by me at Stewartsville so far as the change from angles to plates is concerned. I mailed you on May 22 a skeleton drawing A172 of the bin &c under Giant Rolls embodying all the changes & suggestions as made by you when I was in Florida - not receiving any acknowledgement of this letter or print I have detailed the whole of it on the lines as set forth, and these details have been sent to you. On June 2<sup>nd</sup> as I wrote you I left for Norway - returning here July 5 - leaving again on July 8<sup>th</sup> for Sweden at the request of the Sunderland Co. to join Prof. Louis & Mr. Ballantine who had been sent out whilst I was in Norway to investigate the Grindal system of Briquetting - I had hoped to

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ENGINEERING DEPARTMENT.

TELEGRAMS: STAMCOLLI, LONDON.

*Tizalan House, Arundel Street.*

*London, W.C.*

Keep out of this at least until I could talk matters over with you, but the C<sup>o</sup> took the matter up and I had no choice but obey instructions. At this time I will just say that most successful briquettes were produced, several tons of which have been sent to Consett where they have been used & the verdict is favorable. I will shortly mail you a full description & when you see Prof. Louis' report, having in mind his previous report on "Magnetic Separation" - in which you wrote "Simpskin read this then see me it is dreadful" - you will have an idea what I mean when I say I have had to stand up & fight for you & your system - or we would have had "Grondal & Louis" all through. I returned to London on July 19<sup>th</sup> and since that time have been very busy attending to various matters. The other day I wrote you that we were mailing you a lot of prints and no doubt most of them if not all have reached you ere this. My time is absolutely all taken up & this job is no "cinch" for I discovered if I did not take over the whole business our estimate would be away off. The first attempt to send out prints &

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**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANCOLLI, LONDON.

*Fitzalan House, Arundel Street,*

*London, W.C.*

+ specifications, getting in bids on a given day, then opening them in solemn conclave which is the custom here showed me we would be in the long damp grass very soon - so I said all the bids were too high and I asked the Board to appoint a Works Committee + let me handle the getting in of prices + place them before the Works Committee with my recommendations - this was done and I am very pleased to be able to say to you that up to date all contracts made are well within our estimate - but all this has not been done without considerable hard work on my part which I did not expect to have to take up - I think however you will agree with me that it will be an extra feather in your cap if we can carry out + start this plant within the estimate. Please do not think for one moment my hat does not fit - I am just the same old dollar bill + just as fond of my work as ever - first here in the morning + last to leave at night + keeping everybody around me up to the mark - Do not think it is all "ego" with me, it is not, you have been always put foremost by me

*Standard Construction Corporation Limited.*

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TELEGRAMS: STANCOLLI, LONDON.

*Fitzalan House, Avondel Street,*

*London, W.C.*

as it is my pleasure as well as my duty. I am not seeking notoriety as our friends "Ho. Roberts & Co." do at every move - see American, English & Norwegian papers. I am willing to carry the message to Garcia & shall be more than content if at the completion of the work I have your commendation. Now what I want to ask is that you show a little more confidence in me & try & get it out of your mind that I am trying in any way to supersede you in this work - I assure you that I am not doing a thing that you will not approve when you see the Plant in operation. I am using judgement in everything, weighing everything carefully & not pushing headlong. On my last visit to Stewartville to go over the plant with Mr. Jayne at your suggestion & made notes of all "bugs" & "changes". I left a little puffed. A certain gentleman who seemed to have charge of the drafting had three or four draftsmen in the office ready to start work, whilst others who had been on my staff & with Darling were also about. I was polite enough to say to this gentleman that I had discussed

*Standard Construction Corporation Limited.*

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANGOLLI, LONDON.

*Fitzalan House, Arundel Street,*

*London, W.C.*

a many things with you & should shortly mail some drawings embodying all we had talked about for your approval - He replied with a loud voice & with a cynical laugh, looking around the room for approval - "Oh wait until I get the drawings. I'll cut them up" - which of course was particularly nice & pleasant for me - & gave me the very comfortable feeling that my drawings "would not be understood". Whilst I don't want to criticise the gentleman I must ask you kindly in future to take up my work yourself & let it be a matter between us - & trust me to take care of all the little details - What will be the outcome of your letter to Mr. Rhodes I don't know. He went post-haste to Darrow-in-Furness where the Steel Institute was holding a meeting & saw Sir David Dale, Mr. Ainsworth & Mr. Williams, and all four have combined in sending me word of their unabated confidence in me & my work. I shall look with interest to your reply to this somewhat long communication - I would also like you to tell me how matters are going at the



*Standard Construction Corporation Limited.*

ALL LETTERS SHOULD BE ADDRESSED:-

**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANCOLLI, LONDON.

*Fitzalan House, Strand Street.*

*London, W.C.*

Cement-Plant. I hear the Battery is now on the market  
+ I congratulate you. My people here are discussing all  
sorts of schemes + I am continually making estimates  
on Road or Dry Crushing, Cement Plants &c. &c.

With the utmost esteem + best wishes.

I am yours most truly

Wm. Simpson

*Standard Construction Corporation Limited.*

*Fitzalan House, Strand Street*

ENGINEERING DEPARTMENT.

TELEGRAPH ADDRESS,  
"STARGELLI-LONDON."

*London, W.C.*

Sept. 8. 03

4.30 p.m.

Thomas A. Edison Esq.

Dear Sir

A great many of our people come in here to see me & discuss progress and prospects. The fact that we have not been able to tell them the Cement Plant is successfully running has caused some to ask very awkward questions, and at the meetings of our various companies which I am bidden to attend I am often asked very pertinent questions - My answer is always to this end "Mr. Edison knows what he is about and there are a many things connected with this process somewhat

puzzling to even Engineers unless they have particularly studied the work, but you may rest assured it will be a success" - I say the same thing to those who call & my unwavering faith in both you & our undertaking has worked wonders - I think it will be well for you to tell me occasionally about progress at the Cement works - you can trust me to handle any information you may give me to your interest. I am so pleased to hear from Randolph that the newspaper articles about your eyes were "to say the least" exaggerated - I hope to make a trip & see you soon after Christmas & then we can discuss a many things & probably you will feel, after our talk that possibly you have

been mistaken & Simpkins is an - Edeem man -

Yours most truly

Wm Simpkins

A stylized handwritten signature, likely of Wm Simpkins, consisting of a large, sweeping initial 'W' followed by a smaller 'S' and a final flourish.

*Standard Construction Corporation Limited.*  
*Fitzalan House, Strand, London, W.C.*

ENGINEERING DEPARTMENT.  
TELEGRAPH ADDRESS:  
"STANGELLI-LONDON"

*London, W.C.*

Sept. 8.03  
6.15 p.m.

Thomas A. Edison Esq.

Dear Mr. Edison

I am just in receipt of a notice asking me to attend a meeting of the works Committee on the 23<sup>rd</sup> inst. to discuss the "Riguetting Scheme". From my to-days letter with reports you can judge pretty well of the situation & I think now is just the time - if you so desire - to assert yourself & also show that you have some confidence in my ability & integrity of purpose. At any rate it will not do to give Louis & his gang a foot-hold. He

is now trying to press on us some fellow to assist with the Magnet work - saying he has "such a fine touch" &c &c. & I must oppose him, if I am to be loyal to you & to myself. He does not know the first principle of our work & lays hold of the veriest straws if he thinks 'it will help him'. What he says to the Committee in my absence I don't know - but I am beginning to know the man & can read him like a book. When you get this - if you feel as I do about it - please cable the Dunfermline Co. so the meeting may be before the 23<sup>rd</sup> if it should turn out to suit some of the members better - they have a happy way of changing dates at a days notice. Please cable either that you approve my report &c

re brigetting - or advise the Co. to leave the brigetting  
matter in my hands - I can then lay the whole scheme  
out & submit it to you - I have thought it all out  
& whilst we have a very ugly piece of land at the  
site selected I think I can get it in all right -  
Anyhow you want to help me to kick off the  
Lewis crowd & this will do it & I think for good -  
Am writing in haste to catch the mail train -

Yours much truly  
Wm Simpson

The Committee consists of

W. Rhodes - who is your great admirer & my friend

Amisworth

Williams

Mason

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

*Fitzalan House, Arundel Street,*

No: 29.

*London, W.C.*

September 8, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

When Mr. Dick was here a short time ago, and soon after the matter of briquetting had been discussed by our people, he told me that he was writing you with reference to the same and asked me to send you as soon as possible full particulars of the Grondal process which it seems our people have decided to adopt.

I went over to Sweden several days after Prof. Louis and Mr. Ballantine had arrived there and had an opportunity to investigate carefully one of their furnaces which was at work, and another which was under construction.

The furnaces are simple tunnel furnaces of the ordinary type and differ very little from the furnace which you were building at the Laboratory in general design excepting that the crown of the furnace is brought down within a very short distance of the briquettes on the car passing through, and that producer gas is used for fuel instead of powdered coal.

T.A.E.2.

I enclose you exhibits A.B.C. and D. which will put you abreast of the position of affairs at present.

'A' is the report of Prof. Louis and if you will read this carefully you will see that he has gone entirely out of his way making suggestions, etc., as he has I believe in all other reports of which copies have been sent to you but more particularly in his report on the magnetic separation which you will very well remember.

Exhibit "B" is Mr. Ballantine's report which is somewhat more to the point.

Exhibit "C" is the Minutes of the meeting of the Works Committee which was held to consider these two reports. I may say at this point that when I arrived at the meeting it was very evident to me that the whole matter had been discussed with Prof. Louis in the north before the members of the Committee came up to London, and that their minds were pretty well made up as to what they would recommend. This being the case, I had very little to say as I intended to look somewhat further into matters before agreeing with their recommendations, and this resulted in Exhibit "D" which is my report as you will notice under date of August 31st is much later than the others.

Since my report has been sent to the Committee I have had no indication from them as to what they intend to do in the matter, but I am pretty well satisfied that they will eventually carry out my suggestions as to leaving out this extra set of rolls which I do not consider at all necessary.

M.A.B.C.

I am sending you one briquet which was made amongst many by the improvised press and afterwards passed through the Grondal furnace, and I think you will agree with me that it is a very fair sample of what a briquet should be. This contains about 70% hematite and 30% magnetite and no added fines - of this I am perfectly sure.

The whole of the briquettes made were just as good as this one but those made with the Grondal press were not in any way equal to the one I send you.

I have gone carefully into this business and if we are to adopt the Grondal furnace I am satisfied we must also adopt another press, other than that used by the Grondal people - which is a very crude affair at the best - and it is for this reason that I have recommended to the Board the adoption of the press made by the Mould Co. of Pittsburg - Exhibit E.

This press will I think make the cylindrical briquet or it will make the size and shape as recommended by the Works Committee, and whilst I am perfectly satisfied that we can handle these briquettes automatically if made of a cylindrical shape, I agree with the recommendations of the Committee that we go slowly on this point and put in presses to make the 6" x 5" x 3" briquet which will have to be removed by hand to the cars.

I know the Mould machine very well and have seen it in use in a great many places, and to my mind it is so much the



T.A.E.4.

superior of any other briquetting machine which we can purchase that I had no hesitancy in recommending it to the Board.

There are quite a number of briquetting machines made in this country and in Germany which I have investigated but I do not think that any of them can come up to the one recommended in any way.

Whilst waiting for the decision of the Company as to whether or no they will adopt the recommendations of the works Committee, I am making a general lay out which I think will be best and after I have got it into proper shape I will send you a print.

After you have gone over these several enclosures I wish you would write me what you think about it anyway. As this is not your briquetting scheme, I was in hopes that I might have been left out of it entirely and that it would have been turned over to the Gröndal Engineer, but when I found the way things were going, as usual "I stuck my finger in the pie" and this is the result.

I should say that quite a large number of briquettes were made of the Dunderland ore - both by the Gröndal press and by the press improvised by Mr. Ballantine - and there is no comparison between the two as the briquettes made with the improvised press are so much superior to the others. Quite a quantity of these briquettes were sent to the Consett Iron Works and the report of the Works Manager and the Chemist is very

L.A.B.5

gratifying, in so much so that all the worries which our people have had with respect to getting out a satisfactory briquette seem now to be set at rest.

Yours very truly,

Wm. Simpson

[ENCLOSURE]

A file

Report on the Grondal System of Briquetting.

The DIRECTORS,

Dunderland Iron Ore Co.

Gentlemen,

In accordance with your instructions, I again proceeded to Herrang, in company with Mr. Bullantins, to conduct a further series of experiments upon the Grondal system of briquetting, which process I have described in my report to you dated April 23rd inst.

The Grondal process properly speaking consists essentially in making briquettes of iron ore without any binder except water, and firing the briquettes thus made in the long tunnel-like furnace, drawings of which accompanied my report already referred to. The material experimented on consisted of Dunderland Specular iron ore and magnetite, mixed in various proportions ranging from about 10% of the former and 90% of the latter, to 90% of the former and 10% of the latter. All these mixtures gave practically identical results, and it would seem that specular ore is just as easy to briquette as magnetite, although it may possibly require a slightly higher temperature. Experiments were tried with briquettes made in two ways, namely in the drop press previously described, and in a press improvised by means of a powerful screw jack, which made a briquette 3 in. in diameter, nearly 4 in. long, and weighing about 3 lbs. The pressure exerted in making these briquettes was probably about 2 tons per square inch, and the briquettes made in this way were rather better than those made in the drop-press. In both cases, however, a briquette was produced which would perfectly well stand handling (before going into the furnace) but which was too tender to admit of automatically charging upon the cars.

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About one ton of Dunderland briquetton was made altogether in various ways, and all of these were quite satisfactory, the resulting briquettes being strong and hard, and shewing no tendency to form fines. A briquette taken from the furnace at a red heat could also be thrown into a bucket of water without disintegrating. The briquettes produced (about one ton) have been forwarded to the Consett Iron Ore Company, Ltd. The furnace worked well and economically; when working on Herrang magnetite, it turned out in regular work a car of briquettes, weighing about 15 cwt. every half hour, with a coal consumption in the gas producer equal to 3.75% of the weight of briquettes burnt. Allowing at the much higher rate of 1 cwt. of coal per ton of briquettes, and taking the coal to cost 10s. per ton at Dunderland, the cost for fuel will amount to 8d. per ton of briquettes. The charcoal beneath the furnace was always fairly cool, the furnace lost but little heat by radiation, and the temperature of the escaping gases, as also of the issuing briquettes, was about 150° C. There is therefore but little heat lost, the chief consumption being probably that required to evaporate the water in the raw briquettes (amounting to about 7.5% of the weight of the ore). The temperatures attained were measured by means of Seger cones, which showed that a heat of 1400° C. was readily obtainable. The furnace is not expensive to build and should cost but little for repairs; it thus evidently answers all requirements. It must be remembered that the furnace at Herrang is intended for calcining, so as to remove sulphur, and not merely for burning briquettes, and hence works relatively slowly. I found that Dunderland briquettes can, however, be burned perfectly when drawing cars at the rate of one every quarter of an hour, and have no doubt that equally good results could be obtained by drawing at the rate of one every ten minutes, if Dellwik water-

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can or producer-gas, rich in hydrogen (such as made e.g. in the Taylor or any other producer worked by a steam jet), were employed instead of ordinary producer gas. Such gas gives a higher local temperature and would therefore be preferable for the manufacture of briquettes. A car of drop press briquettes (6" x 6" x 3") of Dunderland ore will carry two layers each of 12 rows of 7 briquettes, and as each briquette weighs about 5.5 kilos, each car carries close upon one ton of briquettes. For a large out put multiple tunnel furnaces would be best, a 6 tunnel furnace forming probably a convenient unit. Such a furnace would be about 33 ft. wide and 165 ft. long. Assuming each tunnel to burn a car carrying one ton of briquettes every 15 minutes, this unit would burn about 500 tons per day, so that 6 such units (5 in action and one in reserve) should suffice for an output 2500 tons of briquettes daily. The width of car now in use has been adopted so as to enable the workmen to place the briquettes upon the car, working from one side only. If presses were arranged along both sides of the car track, the cars could be made wider, say about 5 ft. thus making a better furnace, and allowing a 4-tunnel to be substituted for the above 6-tunnel unit. Such a unit with cars taking 12 rows of 12 briquettes each arranged diagonally as at present and with two tiers on each car, would turn out rather over 25 tons per hour. As each press makes 10 briquettes per minute, 8 presses will be required for each unit, these being conveniently arranged in two groups, each supplying a pair of tunnels, and being arranged by twos on either side of the car track; the pair remote from the furnace would make briquettes for the lower tier, and the pair nearer the furnace those for the upper tier. Each unit would then require 8 men per shift at the presses, 2 at the charging end and 2 at the delivery end

[ENCLOSURE]

of the furnace. Allowing one man at the gas producer and 1 man at the mixer, assuming that three shifts are worked and that wages average 3 kr. per day, wages would amount to about 3½d. per ton of briquettes. Each press is stated to require 3 HP. so that allowing for the haulage of the cars a 30 HP. motor would be required for each unit, corresponding to a coal consumption of say 30 cwt. of coal daily, or but little over ½d. per ton of briquettes. The total cost of fuel and wages would thus be about 9½d. per ton, to which must be added the charges for wear and tear, repairs and management; no data are available for estimating these, but it seems safe to assume that the total cost of briquetting by this method should not exceed 1s. per ton.

By the employment however of a powerful briquetting machine working by pressure and not by a blow, i.e. a press actuated by mechanical leverage, or by hydraulic power, it seems possible that a briquette may be produced firm enough to bear transfer to the cars by mechanical means, and thus to dispense largely with hand labour at the presses. I am inclined to think that a cylindrical briquette, 3 in. in diameter, and 3½-4 in. long, could be made with finely ground ore, strong enough to bear such treatment, by a pressure of 4 or 5 tons per square inch, or say a total pressure of 35 tons, but this is a point that will have to be determined by actual experiment with a suitable press. Our experiments at Herrang show that a car filled with such briquettes can be burned as thoroughly and as rapidly as a car charged by hand with the present form of square briquette, and that the fact of these cylindrical briquettes touching each other makes no difference to their thorough burning. All questions concerning the burning of the briquettes may now be looked upon as satisfactorily settled.

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That of the best form of press, and in connection therewith, of the best shape of briquette, and of the best way of transferring the same from the press to the car, still remains to be decided by experiment with various types of presses, -

My conclusion is that the Grendal method of burning briquettes of Dunderland ore has been proved to be quite successful, provided that the following points are attended to, these being stated in the order of their importance:

1. Sufficiently high temperature. The temperature in the combustion chamber must never fall below  $1300^{\circ}$  C. and is best kept between  $1350^{\circ}$  and  $1400^{\circ}$  C. This can readily be secured by means of producer gas made with the injection of a sufficient quantity of steam, and with a properly proportioned furnace.
2. Fineness of the ore. The more finely ground the ore, the better are the resulting briquettes. I am inclined to advise that all the magnetite should be ground wet, and wet separated, as suggested in my previous report, and that the specular ore should be run through a pair of fine grinding rolls on its way to the sprinkler and mixer, which will feed the ores moistened uniformly with 7 to 8% of water, and thoroughly mixed, to the presses.
3. Sufficiently high pressure. As already indicated whatever shape of briquette and type of press may be ultimately adopted, the briquettes should be made under a pressure of never less than two tons upon the square inch; a machine working by steady pressure seems to give better results than a drop press, although quite satisfactory briquettes have been obtained by the use of the latter.

I am, Gentlemen,

Yours obediently,

(Signed) HENRY LOUIS.

[ENCLOSURE]

Copy. B

AUGUST 4, 1903.

To  
The CHAIRMAN and DIRECTORS,  
Dunderland Iron Ore Co.,  
Fitzalan House,  
Arundel Street, W.C.

Gentlemen,

Report on the Grondal System of Briquetting.

I arrived at Herrang with Prof. Louis on the afternoon of July 7th, and found the Grondal furnace in full working order running night and day. Owing to some difficulty with their fine grinding machinery they could not get enough "fines" to keep the furnace running to its full capacity, and they were therefore only passing half the number of briquettes through the furnace per hour than I understand they have been in the habit of doing.

As a plan of the furnace has already been sent to you, it is needless for me to go into details of construction, dimensions, etc. The press, as already described by Prof. Louis in his report, is a "drop press", making eleven briquettes per minute, each briquet weighing a fraction less than 10 lbs. - the output being practically 100 lbs. of briquettes per minute, or 2.6 tons per hour. The briquettes are removed by hand from the press, and placed on edge on a car, 84 briquettes making one layer; the briquettes are placed two layers deep, 168 briquettes in all, or a total of 1680 lbs. per car. Usually a car is placed in the furnace every half hour, and at the same time, one is taken out, although when we arrived they were only putting in one car every hour for the reasons already stated. Whether a man would be able to stand at a press hour after hour and remove the briquettes as they are made for a full shift, is something of which I am very doubtful. It is more than likely that three men would be required for every two machines, so that using the Grondal press it would cost at least three pence per ton to place the briquettes on the car. The tops of the present cars



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are covered with common red brick, and to prevent the burning of the same a layer of concentrate is spread over the bricks each time the car is loaded up, which seems to me a very extravagant proceeding. Mr. Grondal however is arranging to put on fire brick covers which will overcome this difficulty which is common to all tunnel furnaces used for this and other purposes. The bottom of the cars in passing through the furnace remain practically cool so that there is no fear of their burning out. In my opinion, the economy of the furnace is first rate, the temperature of the escaping gases being 150 centigrade, and the temperature of the briquettes is about the same. This high rate of efficiency however could only be kept up by placing a car in the furnace every hour, as I noticed that when we forced the furnace and withdrew the car every quarter of an hour, the briquettes came out red hot. This however could be greatly reduced by lengthening the furnace as proposed by Mr. Grondal. The producer is charged eight times in twenty four hours, each charge being 150 kilos, or 2900 lbs. per twenty four hours.

Unfortunately Mr. Grondal had mixed up our hematite and magnetite concentrate together and had ground up about 50% of it to "fines" before our arrival at Herrang. As I shipped equal amounts of both concentrates (as instructed) this of course made a very high magnetite mixture, which on assaying proved to be 50% magnetite and 40% hematite. This I think was also due to the fact that the ore to make the "fines" was crushed in a ball mill and probably a big lot of hematite washed away.

We made several briquettes from this mixture, which are marked No: 1 and passed them through the furnace. They were four hours in the heat and looked first rate when they came out.

Briquettes marked No: 2 are from a mixture 42% magnetite and 58% hematite.

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Briquettes marked No: 3 are 45 parts magnetite and 55 parts hematite. These were in the heat two hours which is the usual time allowed for the Grondal briquettes. A quantity of the No: 3 mixture was taken and made into briquettes three inches in diameter and about 4 inches long by means of a "screw jack", giving a pressure of about two tons per square inch. These briquettes however were much too weak to stand automatic handling, owing to the want of pressure, but were strong enough to stand being piled one on top of the other to pay turvy and as close as they would lie on the car. They were passed through the furnaces and were in the heat the same length of time as Nos: 2 and 3 Grondal briquettes, and, as you will see, are certainly a good deal better.

Briquet No: 4 is from a mixture of 30 parts magnetite and 70 parts hematite, and No: 5 is a mixture of 10 parts magnetite and 90 parts hematite.

No: 5 I consider a most severe test as all the fine dust had been washed out of the ore and this, combined with the high percentage of hematite, makes a mixture to briquet which, according to former theories, would be impossible.

A quantity of No: 3 mixture was made into briquettes and passed through the heat in one hour which equals putting a car in the furnace every quarter hour. These briquettes are marked No: 33.

From the sample briquettes it will be seen that the high pressed ones are much better than those made by the drop press.

That added "fines" are not needed as demonstrated by No: 5 as the concentrate from which these briquettes were made had not half the amount of "fines" that our regular concentrate contains.

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That the length of time in the heat makes no difference providing the temperature of the briquet has reached not less than 1350° centigrade, as proved by the briquettes No: 33.

That hematite makes just as good a briquet as magnetite, providing the temperature in the furnace is all right, as proved by briquet No: 5.

That briquettes can be piled one on top of another on the car previous to being placed in the furnace, providing they are made with a sufficient pressure to withstand the weight, as proved by briquet No: 3.

These experiments have only proved what I have always held, - that to make a successful briquet, high pressure is of the first importance: that "fines", other than those produced in the regular grinding of the ore, are not necessary; and that unless some gain can be made in elimination of the phosphorus by finer grinding, it would only be spending money uselessly to adopt it, and that, if adopted, wet grinding would be entirely out of the question.

The Grondal furnace is very simple in design, cheap to build and not liable to get out of order, and does its work. There is very little difference between the Grondal and other tunnel furnaces with which I am acquainted, but it is probably the first time that such a design has been adopted for the purpose of making briquettes.

If we were to adopt these furnaces I would suggest two slight improvements - one being that expansion pockets be left in the fire brick lining to take care of the expansion; and the other, that the sub-structure as seen on the plan can be entirely done away with, providing the forced draft be introduced which would be much more effective and place the furnace under much better control, making it entirely independent of atmospheric conditions. This matter I have talked over

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with the Engineer who has done all the designing for Mr. Grendal and he is entirely in accord with these suggestions.

The advisability of building the furnaces in units of four or six was talked over, but this is something that cannot be decided immediately as it depends a great deal on the ground available, and I think will have to be left to Mr. Simpkin to settle. This much however I would say - that too large a unit should not be adopted as it would mean too many furnaces idle should an accident happen to one of them.

I am, Gentlemen,

Yours obediently,

(Signed) J. B. BALLANTINE.

[ENCLOSURE]

DUNDEELAND IRON ONE CO., Ltd.

Minutes of a Meeting of the Works Committee held at Fitzalan House, Arundel Street, Strand, on Wednesday, August 6th, 1903.

Present. Mr. Ainsworth (in the Chair)

Mr. Rhodes.

Mr. Williams.

In attendance. Mr. Pollen. ✓

Part of the Professor Louis.  
time.

Mr. Ballantine.

Mr. W. Simpson.

1. Minutes of the Meeting of the Committee held on Tuesday June 16th were read and signed.

2. Grondal System of Briquetting.

Prof. Louis' Report dated July 20th on the recent visit and experiments made with the Grondal System of briquetting at Herrang, and Mr. Ballantine's report dated August 5th on the same subject were read.

The main difference in the conclusions of these two reports is on the question of whether "added fines" are a necessity in making these briquettes, but there was a consensus of opinion that the addition of fines would probably give a harder and stronger briquette. After careful consideration of all the points raised in the reports the Committee make the following recommendations to the Board:-

1. THAT THE GRONDAL FURNACE BE ADOPTED FOR BURNING OF BRIQUETTES MADE BY THE COMPANY.

As regards the size of furnace the Committee recommend:-

(a) It shall be of sufficient width to permit of taking a car 4 feet 6 inches to 5 feet wide.

The reason for the present breadth of the car (3ft.) in use at Herrang is stated to be that the men placing the

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briquettes on the car work on one side of it only and are therefore unable to cover a greater breadth. Arrangements will be made for men to work on both sides with the broader car.

(b) That the furnaces be built in units of four tunnels of the broader type. Certain other modifications of construction etc. to be considered by Mr. Simpkin when preparing his general plan.

2. THAT THE COMPANY ADOPT THE MOULD PRESS FOR MAKING BRIQUETTES.

The Committee make this recommendation because it appears to be proved beyond a doubt that the briquettes made under high pressure are superior to those made with the present press used in the Grondal process which is a drop press.

3. THAT THE BRIQUETTE BE A SQUARE BRIQUETTE SIMILAR IN SHAPE AND WEIGHT TO THE PRESENT GRONDAL BRIQUETTE BUT WITH THE CORNERS ROUNDED OFF AND THAT FOR THE PRESENT HAND LABOUR BE USED TO PLACE THESE BRIQUETTES ON THE CARS.

The Committee make this recommendation because they consider it of the very highest importance that the Company do not adopt at the commencement of their working a method which is experimental.

The question of whether briquettes made under high pressure can be automatically dumped on to the cars has not been satisfactorily demonstrated although there seems a strong probability that this can be done. There is, however, no doubt that the use of hand labour ensures a good briquette and the Committee is of opinion that to dump the briquettes automatically would be to run the risk of placing an inferior briquette on the market and jeopardising the sale of the Company's product. For economical handling, the larger and square briquette is necessary: for automatic dumping, the

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smaller and cylindrical will be required. Should it be hereafter found by experiments that an economy can be effected by the automatic dumping, and that the cylindrical briquette will stand, being carried on a conveyer to the cars and dumped, it is understood that the same Mould presses can be utilised, it being only necessary to change the dies and plungers.

4. THAT THE WHOLE OF THE CONCENTRATES USED BE REGROUND SO AS TO GIVE ADDED FINES.

The Committee make this recommendation because it has been proved that added fines give a satisfactory result whereas the briquetting without fines although quite possible has not been satisfactorily demonstrated.

Whether additional fine grinding rolls are placed at Sterfoshei or at Guldsmødvik may be left for further consideration dependent on Mr. Simpkin's report as to whether the necessary plant can be put down at Sterfoshei without serious disarrangement of the plans on which the work at that place is now proceeding.

The question of regrinding the magnetite only as it comes from the magnetite separators was discussed but the Committee have come to the conclusion that there are too many difficulties to contend with and no apparent advantage to be gained in the way of increased purity of concentrate.

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August 31, 1903.

The WORKS COMMITTEE,  
Dunderland Iron Ore Co.,  
Fitzalan House,  
Arundel Street, W.C.

Dear Sirs,

Acting under your instructions, I proceeded on July 8th to Herrang to join Prof. Louis and Mr. Ballantine in an investigation of the work of the Grondal furnace. I arrived at Herrang after the work of actually forming the briquettes of the Dunderland concentrate had been completed and just as some of them were about to be taken out of the furnace. Both Prof. Louis and Mr. Ballantine kindly put me abreast of all they had done up to the time of my arrival and I have also had an opportunity to read their reports and listen to the discussion of the same at your meeting.

I agree with them in that satisfactory briquettes were produced by the Grondal furnace from the Dunderland concentrate of different proportions as stated in Mr. Ballantine's report and as shown by the samples submitted to your Board. I also agree with the suggestion that should we adopt the Grondal Furnace, they ought to be made wider and longer.

Whether they are to be erected in batteries of four or six, or singly, I think is a matter that cannot well be determined until the whole scheme, cost of construction and cost of handling the material, has been thoroughly worked out.

I do not agree with the cost of briquetting as set forth in Prof. Louis' report, as my calculations show not less than five pence per ton for labour only, not including the men at the gas producer, and this is based on working three shifts per day of each eight hours, and paying the men Kr.3 per shift.

Mr. Grondal in his English completed patent specification No:18429, July 10, 1902, says, -



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"I find that if the ore is sufficiently sub-divided it may be brought into the form of blocks by mixing it with water and stamping it into bricks which are immediately burnt in a suitable furnace."

Prof. Louis says, -

"The more finely ground the ore the better are the resulting briquettes."

It is very unfortunate that the Grondal people tampered with our concentrates before the arrival of Prof. Louis and Mr. Ballantine, which however they did in direct opposition to our instructions and for reasons only known to themselves.

Mr. Ballantine says, - "They mixed the hematite and magnetite concentrate together and ground up 30% of it to fines before our arrival at Herrang."

It is not clear to me whether this means they ground up 30% of the concentrate to try and make fine, or they imagine they actually produced 30% of fines, as after this mixing and grinding it was hardly possible to find how the concentrate stood with respect to the supposed fines. I understand wet grinding in a ball mill was the process adopted, and if so I do not hesitate to assert that little or no extra fines were produced from our ore. After hematite has been reduced to a certain size, it would be hardly possible to grind it finer in any mill such as they at present have at Herrang. Magnetite is somewhat more amenable to reduction and if a small portion of fines of magnetite were produced in the grinding, I am sure they were afterwards washed away. I will go further and say that our concentrate, after treatment by the Grondal people in their mill, which concentrate was afterwards made into briquettes by Prof. Louis and Mr. Ballantine, had less fines than the original concentrate as shipped by us.

As before stated, it is a pity our concentrate was tampered with as it prevented any comparison being made between

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the relative fines of the Dunderland and Herrang concentrates and the amount of what is termed "added fines". Mr. Grondal is wedded to 'added fines' and Prof. Louis advocates the same but evidently without having used any means to find out the actual amount of fines which he says need to be added to the Dunderland concentrate, nor does he say the amount of fines which they assert is used with the Herrang ore. As far as I can gather he has simply agreed with the statement made by Mr. Grondal, and neither of them have said what "fines" are.

I do not agree with Prof. Louis in his statement - "that the more finely ground the ore the better the resulting briquettes" - as my experience has shown me that you can grind the concentrate so fine that the briquettes in passing through the furnace will burst open owing to the impossibility of the steam formed from the moisture in the briquette being able to escape. A proper amount of fines, or as Mr. Grondal puts it - sub-division - is necessary, and I claim that we have in our present concentrate all the sub-division we need.

Our concentrate is ground so that it will pass through a .016 screen, and therefore is .016 and less. I shall be pleased to show the Committee that with our concentrate, having a mixture of 70% hematite and 30% magnetite, over 45% will pass through a .007 screen, and less, and that of the magnetite concentrate alone, more than 50% will pass through a .007 screen, and less. I have been given to understand that when Mr. Grondal first attempted to make briquettes of the Dunderland concentrate, hematite alone was sent to him, and as pure hematite contains much less fines than our regular run of concentrate, I think this has probably caused him to bring up this matter of added fines.

[ENCLOSURE]

I understand Mr. Grondal crushes his ore and then separates it, and afterwards grinds a certain proportion into what he calls "fines", but I doubt very much from what I saw when at Herrang whether there are more actual fines in the Grondal concentrate as it goes to the briquetting press than in our general run of concentrate. Grondal's concentrate, I feel sure, is not originally ground as fine as ours, and it is for this reason he must use added fines.

To put in a set of re-grinding rolls, with the attendant motors, conveyors, etc. will cost about £4000. It will cost not over £100 for one of the Committee to go to Herrang with Mr. Ballantine and see briquettes made from our concentrate on the improvised press which is still there, with the addition of water only as a binder, and with no added fines. The gentleman could first accompany Mr. Ballantine to Richmond and see our concentrate boxed in the proportion of 70% hematite and 30% magnetite, and these boxes could be afterwards sealed and sent to Herrang to avoid any tampering with their contents, and I can assure you that if this is done you will see more satisfactory briquettes made than Mr. Grondal is now producing with his alleged addition of fines.

Water has been used as a binder in briquetting many substances, and there is nothing new in its use. Mr. Ballantine when at Pittsburg, at my request, made briquettes on the Mould machine out of the regular Dunderland concentrate and without any added fines, and these briquettes could easily be handled as they came from the machine and without having to use a trowel to lift them as is the case with those made by the Grondal press when using the Herrang concentrate.

I may add that I am reasonably sure we can automatically handle briquettes made from our regular concentrate if of the proper form and made with a proper press, but I entirely agree with your recommendation that it is better to remove the briquettes from the machines by hand until we have had an

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opportunity to try the automatic handling in actual practice.  
My conclusions therefore are, -

1. That the Grondal furnace will work with the Dunderland concentrate to our entire satisfaction.
2. That the furnaces should be made wider and longer so that we can handle at least 3000 lbs. of briquettes per car, putting in and taking out a car every 15 minutes and only using 20 tunnels.
3. That high pressure in the briquetting machine is absolutely necessary to produce a satisfactory briquet.
4. That only a certain amount of sub-division is required in the Dunderland concentrate to make satisfactory briquettes and that in our regular concentrate as it will go to the briquetting machine we have all the sub-division necessary and that we do not need to re-prim for added fines.
5. That Mr. Grondal, if we decide to use his furnace, shall furnish full working drawings of the proposed furnaces, with the changes as set forth, and that afterwards if we have any alterations to suggest, the same shall be submitted to him for his approval.

Yours truly,

(Signed) Wm. SIMPKIN.

September 1, 1903.

P.S. Since writing the above report I have received from Capt. S.H. Pollen a box of the Herrang concentrate, with the "added fines", just as it goes to the briquetting machine, which was sent here by Mr. Grondal. We have carefully dried, screened, and weighed the same, with the following results:-

- 6% of the concentrate was left on a .018 screen;
- 54% of the concentrate was left on a .007 screen;
- 40% of the concentrate passed through a .007 screen.

[ENCLOSURE]

We carried out the same experiment with the regular Dunderland concentrate - 30% magnetite and 70% hematite - with the following results:-

All of the concentrate passed easily through a .018 screen.

48% of the concentrate was left on a .007 screen;

52% of the concentrate passed through a .007 screen.

Thus it will be seen that my surmise is correct and we have more fines in our regular concentrate than the Herrang concentrate has "with its "added fines".

This experiment was carefully made three separate times by a man accustomed to laboratory work and the concentrate in each case was passed the same number of times over the screens.

We shall be pleased to repeat these experiments for the Committee at any time as I think they conclusively show us that we do not need added fines and therefore can save the expense of the extra set of rolls, etc.

*Standard Construction Corporation Limited.*  
ALL LETTERS SHOULD BE ADDRESSED:-  
**ENGINEERING DEPARTMENT.** *Fitzalan House, Arundel Street,*  
TELEGRAMS: STANCOLLI, LONDON. *London, W.C.*

No: 30.

September 8, 1903.

THOMAS A. EDISON, Esq.

*quarto Hunter*

Dear Sir,

Enclosed please find blue print F.322 which kindly substitute for the B.322 sent you the other day with the other Blower prints. You will note that I have changed the number of blades from six to eight which will give a more even current and not so many pulsations.

We are also mailing you under separate cover a set of prints of the 7 ft. Rolls as follows:-

C.105, 106, 114, 131.

B.121, 122, 123, 124, 125, 131, 132, 133, 134, 135,

153, 162, 216.

015.

Yours truly,

*Wm Simpson*

*C.K. O'S.*

*Oct. 5-03*

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLL, LONDON.

*Standard Construction Corporation Limited.*

*Tilgham House, Abchurch Lane,*

*London, W.C.*

No: 31.

September 26, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

Since sending you the drawings of the Blowers I have decided to make the shell of the blowers of  $\frac{1}{4}$ " material, stiffened where necessary with angle iron, instead of out of  $\frac{1}{16}$ ". This adds very little to the cost of labour and will make a much superior job.

We have completed the small set of Fine Grinding Rolls and are now putting them in at the Laboratory. We shall build a blower exactly of the size which we purpose using at Dunderland and shall be able to carry out some very interesting experiments so as to find out the proper speed and also the best position for the baffle plates, and to decide what number and size of screens we must use to equalise pressure.

The General Meeting of the Dunderland Company was held on the 24th, a report of which will be sent to you, and I will simply say here that everything passed off very smoothly and what the board has done met with the approval of the stockholders.

The Dunderland Iron Ore Co. have finally decided to use the Gröndal process for briquetting and have given instruction to take up this work with Mr. Gröndal. When I have same in a condition to send to you, I will mail you a complete set of the drawings so that you can see exactly what the whole scheme is, and it may be if you should eventually put up a concentrating and briquetting plant in the States, it will be advantageous to use this or a similar process.

It is very likely that I shall make a trip over to see you early in the coming year, as I hope by that time to have everything crystallised, for when I go to Norway it is my intention to remain with the plant continuously until it is in operation.

So far, everybody who has worked with me is very enthusiastic about the work, and I have no fear about bringing it to a successful issue.

Awaiting your favours, I am,

Yours most truly,

Wm. Dunderland



*Standard Construction Corporation Limited.*

ALL LETTERS SHOULD BE ADDRESSED:-

**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANCOLLI, LONDON.

*Fitzalan House, Abchurch Lane,*

*London, W.C.*

No: 32.

September 28, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

Confirming my late letter, I enclose you herewith a copy of Prof. Louis' report on briquetting which was read before the General Meeting of the Dunderland Iron Ore Co. as I think it may be of interest to you.

Yours truly,

*Wm. Simpson*

1 Enc.

[ENCLOSURE]

*with letter #32, dated Sep. 28 1903*

Copy of a letter from Professor Louis to the Chairman and  
Directors of the Dunderland Iron Ore Co. Ltd. dated Sept. 1903.

---

Gentlemen,

I beg herewith to report summarily upon the Briquetting Process, which is now under your consideration:

The finely ground concentrate produced by the Edison process, and consisting as you are aware, of a mixture of specular hematite and magnetite, is moistened with 7 to 8 % of water, and is moulded into blocks about 6 inches square by 3 inches deep, under a powerful press. These blocks are transferred to iron cars covered with firebrick, upon which they are passed through a tunnel-like furnace about 180 feet long, in which they are heated up to a temperature of about 1300° Centigrade. The furnace is gas-fired, the air needed for combustion being heated by passing over the burnt briquettes, which are thus at the same time cooled. The result is that a marked economy of heat is attained, the consumption of coal being under 5% of the weight of the briquettes.

I have watched the process in operation on three separate occasions, spending each time several days at the works. Two such briquetting plants have been in operation for some time in Sweden with very satisfactory results, working however upon magnetite alone. The works which I visited have made over 2000 tons of these briquettes, a considerable quantity of which have been shipped to this country; they proved to be of ample strength and hardness, arrived in good condition, and gave entire satisfaction. My experiments have shown that Dunderland Ore can be briquetted as successfully as magnetite in this way, a very slightly higher temperature alone being needed. I had about a ton of briquettes made from Dunderland ore, which were shipped home and were quite satisfactory.

The furnace is simple in construction, so that the plant is relatively inexpensive, the costs for fuel and labour are by no means high, and as far as can be judged, repairs and renewals

[ENCLOSURE]

-2-

should not form serious items. The briquettes produced appear to fulfill all requirements of strength and porosity, and are superior to any others I have yet seen. The process is therefore in my opinion quite satisfactory.

I am, Gentlemen,

Yours obediently,

(Sgd.) Henry Louis.

M.A., A.R.S.M., F.I.C., F.G.S., etc.

Professor of Mining.

Received 10/1/02

10/1/02

10/1/02

10/1/02

ALL LETTERS SHOULD BE ADDRESSED:-

**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANCOLLI, LONDON.

*Standard Construction Corporation Limited.*

*Fitzalan House, Arundel Street,*

*London, W.C.*

No: 33.

September 30, 1903.

THOMAS A; EDISON, Esq.

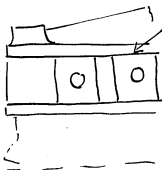
Dear Sir,

Re. Fine Grinding Rolls.

I would like to know if you have found it necessary to arrange for oiling the blocks which carry the bearings for these rolls? I mean the blocks between the top and bottom girder as they are almost constantly moving, - slightly, it is true, - whilst the rolls are in operation.

Yours truly,

*Wm. Simpkin*



[TO WILLIAM SIMPKIN. OCTOBER 12, 1903]

101  
The following are my notes on drawings sent by Mr. Simpkin  
Letter No. 21

C-105 OK  
C 106 OK  
C 114 OK  
C 131 OK  
B 121 OK  
B 122 OK  
B 123 OK  
B 124 OK  
B 125 OK  
B 131 OK  
B 132 OK  
B 133 OK  
B 134 OK  
B 135 OK  
B 153 OK  
B 162 OK  
B 216 OK  
O15 → ~~is~~ this hydraulic may be too light

2

B-342 = Think this flooring too weak -  
All the big pieces are lifted up on the  
teeth & top of dipper and dropped into  
the skips, sometimes they drop 3 ft or more -  
pieces weighing 10 to 15 tons do not give  
a gentle tap - the strain due to impact  
is terrible & it takes strong cars to stand  
it = We had at Edison - Cars with outside  
stringers -  $6 \times 10$  - inside  $4 \times 12$  - the top  
was the same, Cement Co's Car is stronger  
both are entirely too weak for 6 ton  
skips. therefore you can judge ~~where~~  
what B 342 will be = ~~are~~ your axles  
are  $3\frac{1}{2}$  and are entirely too light - and  
you will have twice the load and four  
times the stress from impact due to dropping  
big chunks from the dipper top.

Don't forget the Extra pieces of timber  
on top of car above the regular floor  
to guide the skip on each side of it  
~~car to the~~

Rear end of skip wants 4 Six-one  
inch holes ~~for~~ to permit water to run  
out = Otherwise skip OK —

*Pullen* C-135 OK — all bolts on this check  
will get loose if not perfectly Cottured close  
to nut — ~~preferable to <sup>loosen</sup> ~~loosen~~ and ~~loosen~~~~  
~~with about 1/2 inch gap~~

*Pullen* C-136 = ~~See~~ Hopper door should have  
plate inside to keep mud from  
coming on joint — See sketch NO 1  
otherwise OK

C-137 = My impression is that on the farthest 5 ft roll 9 advised <sup>steel casting for</sup> ~~Cast steel~~ happen so the chunks are large & the pounding is terrible. the roll throws the chunks out of dead line - you better stiffen - the other 5 ft rolls will be OK with this respect, ~~with~~ except that your wear plates will have to be renewed often & you should contemplate the replacing of the corat now with chilled iron

*Notes* C-148 = OK

B 269 - What kind of a rigging are you going to use to permit me man to raise roll doors - we use <sup>hand</sup> windlass & ratchet - this makes it easy for inspecting plates which should be twice a week



3-

B-269 = Is the arrangement on the first  
5 ft roll for removing hopper heavy enough  
I think dirt will get in & disturb your  
trailing. Don't you think it should be  
covered.

There will be a lot of spill of ore from  
open place, under the shaft - I can't  
say if Perundel and ore will give  
enough to be a serious trouble  
but you better be prepared for trouble.  
I also think that on the first 5 ft  
rolls that the bottom edges of the hopper  
undamaged. Rolls having no support  
will be pounded out of shape the first  
few days run - Can't you manage to  
strengthen the edges ~~any~~ the more the better.

6-

B-270- I think hopper under 3rd 5ft  
is rather unstable, as you have two chutes  
hung to it one to the 4th set the other  
to the 5th set. ~~As I understand it~~  
~~deciding if you want to open the~~  
~~hopper from 4th or 5th set, you have~~  
~~to raise the hopper up by so~~  
~~doing you pull the chute down~~  
you will certainly have trouble here

B 289- The bottom of this hopper  
is ~~entirely too light~~ is not backed  
up ~~enough~~ enough - ~~The angle~~  
at Edison under our four foot  
racks we had <sup>one</sup> inch plate backed

7  
up by three feet of solid timber and  
it bent it so bad after some months  
run that ore couldn't run out of  
hopper. The Cavity filled & made  
a non slipping surface - we kept  
things going by screwing plates -  
Now this was not under Giants.  
The Giants at Comout are smaller  
than at Edison & have smaller  
chunks. Yet we have a thick  
~~cast steel~~ <sup>bottom</sup> ~~bottom~~ - with your  
Giants the chunks will be very  
much larger than at Edison  
& owing to the greater weight of the ore  
from high quality and the great fall  
of 26 feet ~~at the~~ <sup>the</sup> ~~gravity~~

8  
great speed due to the combined  
Effect of the Roll & gravity the  
Concussions will be gigantic -  
at the outer an area of 2 or 3 ft  
from the Center line, - ~~with a~~  
the backing you have would last  
no time at all, ~~if~~ on the other  
hand if the mill management is  
well drilled & taught that the  
hopper must never be run so empty  
that the ore will strike the steel  
plate but always the ore  
you will have no trouble -  
It is for you to judge if they  
can be trusted to do this -

9

Something is wrong with the agitating  
roll of the roller feed mechanism —  
Can't understand it — seems to be down  
too far, can't understand big gap  
above roll please send more  
details of the roller feed as this  
is very important to have this  
just right otherwise you will have  
bridging of ore in the hopper &  
this is fatal to your daily capacity  
being kept up. ~~It is a detail~~  
I want details also of upper gear & drive.  
The hopper chute above roller feed in which  
agitating roll is seems to be unstable  
occurs — How can men get in with  
crows to break up an ore arch  
should it occur as it does often

B-290 See 289 B-

B 291 ditto.

B 292 - Think there should be considerable wear plate on sides of roller, food as this wear here is very considerable ~~it~~ it will be expensive to throw away the whole side because a source of wear is worn. Chilled iron would be the thing -

B-293 See notes on 289 B

B-291 - " on 289 B

B-293 = ~~the~~ See previous notes -

B 297 ditto -

B 299 = The wear on the chute from Roller food

to 1st 5 ft roll will be very great ~~space~~ <sup>point where it starts to narrow & all the</sup> at the ~~narrowing point~~ <sup>point</sup> - The wear will be way along the machine - so severe that nothing but chilled iron will be satisfactory -

B-300 - scrap pieces 2000 miles

B-301 -

B-304 - ~~OK~~ see remarks B-269 ~~OK~~  
~~except that~~

B-305 - OK

B-306 = see remarks, on B-269 — also 2 fear  
~~that~~ that Dunderland ore will snow out  
 out all the chutes and so rapidly that  
 you must contemplate removing the worst  
 now plates with chilled plates — even  
 the Chalk is cutting the bottom out  
 of our chutes at Concut works  
 where ore goes from 5 dumps to  
 the blowers and we are getting  
 ready to replace by chilled plates  
 see sketch NO2 ~~and~~ if this is

12

true of a trifling amount of a soft material  
what will it be with heavy loads of  
cutting ore or heavy specific gravity as  
with Dunderland -

B 307. See 306

B 308 = ~~Am not~~ <sup>Think</sup> cast iron check plates are not  
strong enough on 1st 5 ft rolls - there is a  
prying action ~~of the big chunks~~ <sup>between</sup> rolls and check  
will break almost anything - except thick steel casting.

~~309~~ ~~The~~ ~~What you~~ You will note that in all  
my remarks that I fear your hupper  
arrangement on this roll - I am sure  
that it will not stand up -

B 310 = ~~What happens~~ check plate may stand.  
The Racket, but there will be no margin  
for safety - I do not like the instability  
of securing the check plate, the <sup>hopper on</sup> trally  
is not a very stable thing to fasten it to.



Pieces of ore get between tits of roller the  
 Check plate, and the check plate sometimes  
 has to act as a crushing surface, you can  
 imagine what strain it will be subjected to,  
~~one~~ our chilled plates were always breaking  
 on 36 inch rolls - They are breaking at  
 Cement as well as wear -

*Notes*  
 B = 311' OK -

B 312' - shelf too light - the edge will wear  
 rapidly ~~at~~ where ore drops  
 off shelf - to chute below it will wear  
 about  $\frac{1}{8}$  of an inch per day nothing  
 but the ~~deep~~ chilled wear plate  
 chilled drop will stand & this should  
 be made easily observable ~~some~~  
 look out for turning corners & dropping  
 ore continuously on one spot no one

14  
Can realize its effect when enormous  
quantities are handled —

B=313 — See 312 B — gate slides of this kind  
never work orz gets in and sledge hammers  
will not budge them — they work on Coal  
because you can crush that — as the  
space above the pushed in gate will  
fill up with orz there will be ~~about~~  
~~about~~ <sup>about</sup>  $\frac{3}{4}$  of a ton pressing  
on the gate & sometimes the gate  
must be moved quick — there is a  
wedging action of the orz on gate at  
the slot due to pressure & pieces  
clig in ~~at~~ plate & lock it, then  
comes the sledge hammer.  
Something like fig 3 will have to  
be used — this is used at Cement works  
on 3rd 36 Roll chute —

15

B-314 Can't tell how this delivery will work without seeing it. Trail pulling of belt is very, its a ticklish operation to deliver 400 tons an hour on a belt & requires a great amount of experience. ~~In the~~  
~~first run at cannot be over del.~~  
 This branch of the business should be fully detailed & submitted for criticism or it will cause a great amount of delay, trouble & expense.

B 316 — ~~Why did you depart from a~~  
~~Steel Castings for Hopper~~  
~~for Giants?~~  
 I do not approve of the hopper on the Giants at all — It should be made of steel Castings

like that on the Giant at  
Cement works - but twice as  
heavy = In my opinion the hopper  
shown would not last for one  
days crushing = ~~at Cement & Tank~~  
at Edison we had hopper  $2\frac{1}{2}$  inch  
steel <sup>cast</sup> & ribbed every 12 inches  
with Ribs  $2\frac{1}{2}$  thick & 6 deep  
the thrust on the end plates  
of the hopper was taken  
on the side plates & not  
on the 6 balls <sup>but</sup> at Cement  
works the thrust of end plates  
~~are~~ are taken on the  <sup>$1\frac{1}{2}$  inch</sup> balls  
& they are constantly breaking

17:-  
Your emulsions will probably  
be 3 or 4 times what we  
had at Edison —

Chilled plates ~~are not necessary here~~  
~~as there are few touches the chills~~  
would not stand at all & can't be  
used — as chilled plates are <sup>putting</sup> I can't  
see how you are going to take  
them out without taking the  
hopper to pieces — There ~~are~~ <sup>is</sup> no  
brackets to hold Hopper  
laterally except at foot,  
& against beams — You know we  
have four Rods Touches, <sup>diagonal,</sup> ~~back~~  
at Cement,

18-

You havint got the Roller feed above Giants  
right - a ~~six~~<sup>six</sup> foot chunk will give a  
Trajectory landing it on top of the  
roll - <sup>end of hopper</sup> which is very bad, I explained  
this once before to you, the Mill at  
Edison was shut down 3 weeks and  
we lost about ~~ten~~ thousand dollars  
because we didnt have this  
right - ~~It was a mysterious thing to~~  
~~me that you apparently ignore all~~  
~~our experience & plans already~~  
~~existing in regarding these Giants~~

19.

~~except~~ notwithstanding you have no  
experience with rolls of film.

~~Chalmers~~ <sup>the</sup> You must know that

If mistakes are made <sup>on quant.</sup> ~~the~~ ~~cost~~

it will would delay the starting  
of the mill for months and

the Cost ~~expense~~ would be enormous

for general Expenses to say nothing  
as to the ~~exp~~ Cost of any

specific change. Your feed  
roll is to ~~be changed~~ There is so  
much wrong about these

Rolls that you better see design  
 the ~~point~~ Hopper & lay out, following  
 the Experience gained at Edison  
 & Cement & end corrected

Drawing - and with this connection stick to old  
 John Fritz's rule of making lots of mistakes in getting  
 everything too heavy - Remember, static loads & concrete  
 loads are fearfully & humbly different as I know to my regret  
 There is nothing on the drawings

showing what roll is to  
 have the slinger plates,  
 they should be on roll  
 farthest away from Roller feet  
 Leave off the Extension of the  
 Hopper above the Top of



the roller feed - then when  
 ready to run a shield only  
 about  $2\frac{1}{2}$  high & partly around  
 can be put on as its only to  
 guard man cleaning skips &  
 roller feed from being hit by  
 stray Rocks - at Cement  
 our steel casting comes up  
 level with the <sup>top of</sup> roller feed -

You have hopper extend over roller feed  
 How do you expect man to clean  
 out skip & top of each skip -

it couldn't be done & yet its  
absolutely necessary.

If you want any drawings <sup>of kind</sup> from  
Carnot or Edison I will send  
them - See sketch of No 4.

Showing trajectory which  
should be made for large  
chunks as the swivel

Stuff will take care of

itself = you do not send

any details of bearings -

Supports, Roll drive etc. - ~~the~~

~~You are~~ The arrangement of the

It is needless to go into a further criticism of the Grant Roll arrangement. It would seem to me that you could have saved a great deal of time & money if you had sent a general sketch before making elaborate detail drawings.

B 317 - See previous notes,

B 318 See previous notes

B 319 See previous notes

B 320 See previous notes

A 172 See note on B 289 - B 292, B 300.

A=176 - would like details of gardens that Rolles set on - The plan of bracing. These gardens have been criticized before. ~~for~~ as they are shown ~~in the plan~~

24

Without details, my experience will not permit me to ~~approve~~ approve them -

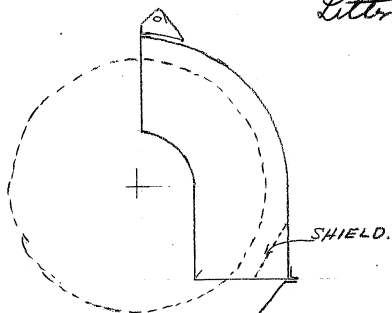
A 160 - I think your monoliths are all right for strength & that as far as they are concerned we shall be all right - The pockets shown in .019 are not shown in

A 160 - Why is this, =

You should send General 4 Detail drawings of Dryer & Connections as there may be changes in details that may turn out troublesome.

We have not received any  
corrected Blue prints of the 1<sup>st</sup> 2<sup>nd</sup> and 3<sup>rd</sup>.  
5 foot - Rolls.

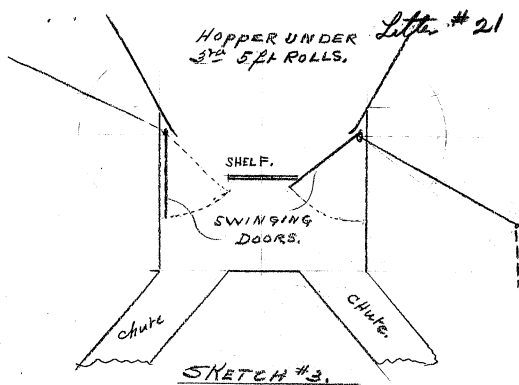
Letter #21



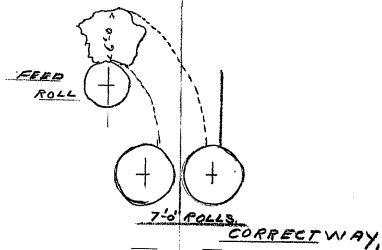
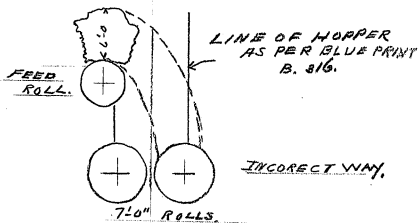
SKETCH #1.



#2.



Letter # 21



SKETCH # 4.



[TO WILLIAM SIMPKIN, OCTOBER 13, 1903]

(11) Letter # 22

B 330 - Balantine got Cement Co. blue  
print - The plates are about right,  
but I may be that D and a and  
one will not diffuent and you  
should have Balantine set their  
sight on a full sized experimental  
model which I understand  
you have in London - ~~which is~~  
~~not~~ So I will leave this drawing  
for you to approve - as to the details  
on drawing the  $\frac{1}{4}$  quarter inch plate is  
all right for stiffness, perhaps it  
would be 10000 to 15000 lbs.  
or when finally assembled  
~~the~~ it on washers nearly to  
heat & burn over as they are

(2)

in a position where they will receive  
no attention -

~~B-322~~ Nate - please show infinite  
drawings ~~for~~ in details if you intend  
a Cutter or other way of locking.  
this will save me lots of writing  
as I always spot every nut that  
can get loose -

B322 - I suppose you have  
determined on your full sized  
model blower that Eight blades  
is better than six - but if you have  
not would it not be better to  
stick to six as we know this

(3)

works + while there seems to be no  
reason why Eight wouldnt be better  
I wouldnt change without I  
absolutely knew from Experiment  
that it was better I have been  
Caught too many times on these  
self evident propositions to make  
changes - The increase in diameter  
from 5 to 6 ft I suppose  
you have tried. ~~in these changes~~  
I approve of these changes  
provided you have tried the Experiment  
on full sized model & found  
them all right with the ore itself.

I note that in your letter of  
May 2<sup>nd</sup> 1922 you state you  
will make the shaft ~~2~~  
three and fifteen sixteenths  
diameter <sup>as requested</sup> whereas in B-322

it is only two and fifteen sixteenths.  
~~Your first order I am~~ In view of  
our troubles with shaft at  
Cement I cannot approve  
of making the shaft any lighter  
than three & fifteen sixteenths  
in diameter & its none too  
large at that —

(51)

I want to call your attention particularly to the fact that the fans should be balanced in the shaft. Ours at the Cement works not hence our shafts are bent & bearings are cutting. the whole thing a source of infinite trouble & Expense -

A 1179 - would like assembled drawing of Blower with baffle plates, Racer feed & everything complete - then I can make a more intelligent criticism to a little blind now. Both drawings sent

(6)

Increasing the casing sheet from  $1/16$ th to one Eight is an improvement. The spiral casing for fan wheel don't look to me as if it was just right - I mean the sweep -

Would like a blue print of the bearings you intend using on fan shafts - & how you are going to ~~make it sufficient~~ going to insure alignment of so long a shaft on such a structure as you will have -  
~~where is the lattice work in bottom~~

(7) ~~if this works well if you do~~

What is the wooden door for  
in the lower left hand corner

Where is the lattice openings in bottom  
~~of~~ with spout to let dust accumulating  
in fan bottom down into main chute,

I suppose you intend doing away  
with the return air flues from  
top of dust bins, using free air  
from Mill. getting rid of the air  
blown in by some means unknown  
to me if this is correct I do  
not approve of it, I know that  
it will not be successful

(8)

If you & the Company must assume  
all responsibility for any changes  
made from the plan at the  
Cement works ~~I have tried~~

~~to get it done~~ As far as I can ~~see~~  
understand the general  
plan of Blower Building  
you intend exhausting from  
all the chambers by a  
long duct, ~~if you~~ ~~see~~  
if you put an exhauster at one  
end or even at both ends,  
~~The exhaust~~ Such a ~~will~~ be necessary



(9)

to draw the air out of the  
Chambers will have to be so  
great that the first, second and  
third Chambers will have a  
draught strong enough to  
suck the ore over - I am

Sorry you have departed  
from an actual successful  
working. 6 Power house +  
go in for changes on the most  
ticklish operation in the  
plant - perhaps I am

(10)

Wrong in my deductions but the  
blame submitted are not clear  
so I can tell properly what is  
intended —

A 178 — Dec 179 —

Should you the Co decide to go into  
the change in the Glover house  
methods, you better insure yourself  
against a failure by ~~then~~ so  
designing the layout that in  
case it did fail you could  
put in the return flues which  
in my opinion you will have to  
do —

(11)

B-217 OK —

B 218 OK

B 219 OK

B 220 OK

B 221 OK

B 222 OK

B 223 OK

B 224 — OK except don't under stand

Bottom "H" of what is <sup>this</sup> shaft for &

why so small a diameter

Compared with the others

Want blue prints of all idler

bearings —

Also side idlers —

Note the side idlers at Cement are  
all being changed as the L Rubber

02  
Catches top of bottom.  
See sketch no 1 — attached here with.

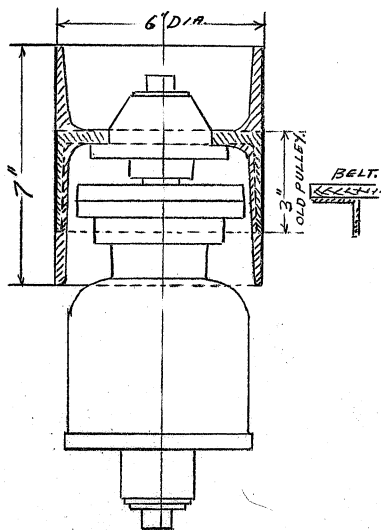
B-225 — I note tail pulley shaft  
does not have any thrust  
collars in bearings — How do  
you take lateral movements.  
Note Want Blue prints of all  
bearings —

B-226 — note same as B 225 on first  
3 shafts — the three other  
shafts have thrust in bearings

(13)  
B-235 OK—

B-240 Have no arrangement  
of Inside & if you & the Co have  
~~no objection~~ of this house so  
Cannot tell anything about it.

Letter # 22



SKETCH #1.

CHANGE IN LENGTH OF SIDE IDLER  
PULLEY.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

*Standard Construction Corporation Limited.*

*Fitzalan House, Arundel Street,*

*London, W.C.*

No: 34.

October 14, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

I am sending you by the American Express a box contain-  
ing one of our idler pulleys. I have refrained from sending  
this until I had made a prolonged test of the same under the  
most exacting conditions, and I am pleased to say that I have no  
fault to find with the bearing in any way. You will see that  
this bearing is adjustable to any angle and so is readily put in  
position. In this - one of the smallest bearings - you will  
perhaps find an objection to the manner in which the oil chain  
has to be placed on to the end of the shaft, as for some reason  
or other the position of the hole on the top of the oil chamber  
was altered by the moulders on account of the coring: this,  
however, has been changed. Even with this bearing which I am  
sending you we find no difficulty in getting the oiling chain  
into its proper position, as we take out the bushing, and after  
laying the bearing on end we put the chain into its proper  
position and drive the bushing in far enough to hold the chain in  
position until we have slipped the bearing on to the end of the

Bearing from 100 to 300 lbs.

*Hunter  
tell Parsons Co  
give bearing to  
you would  
send*

T.A.E.2.

shaft; then by means of a screw driver, or other suitable instrument, we force the bushing back to its proper position and the chain naturally is left on the shaft.

You will find on the bearing sent you, raw hide washers. These however we are not using, but washers of thin copper which are all right.

Yours very truly,

Wm. Sinton

Kindly let me know if the Cement  
Plant is running again -  
S.



*Standard Construction Corporation Limited.*

ALL LETTERS SHOULD BE ADDRESSED:-

**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANCOLLI, LONDON.

*Fitzalan House, Abchurch Lane,*

*London, W.C.*

No: 35.

October 15, 1903.

THOMAS A. EDISON, Esq.

*Hunter*

Dear Sir,

On May 20th, I wrote you in my letter No: 22 that when you received the drawings for the Blowers you would find we had made the shafting 3 15/16". I have just discovered on going over these drawings, which I had not previously checked, that although I had distinctly stated the shafts were to be 3 15/16", for some reason or other they had been drawn up and figured 2 15/16". Please note that the Blower shafts will be 3 15/16 as stated in my letter above referred to.

Yours very truly,

*Wm. Simpson*

*Standard Construction Corporation Limited.*

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLI, LONDON.

No: 36.

S

*Trigalan House, Arundel Street,*

*London, W.C.*

October 17, 1903.

*Answered  
Oct. 29/03*

THOMAS A. EDISON, Esq.

*We are running*

Dear Mr. Edison,

*regularly turning out*

Dr. Rouss was in here today for a few moments and  
*Edison needs 15 to 1700*  
was very pleased to learn from him that everything is going very  
*+ expect to finance two more*  
well at Stewartville. Of course, as you are aware, our people  
*filling them we think we*  
here are very very anxious that the cement plant should turn out  
*Can go to 3500 daily*  
a huge success, as it will enable them to arrange to erect opera-  
*Cement is selling 185 Cents*  
in this country. It goes without saying that I am still more  
*at well - the 1300 are drawing*  
anxious and nothing will please me better than to hear from you  
*direct*  
directly that everything is running successfully and even better  
than you had anticipated.

Yours very truly,

*E*  
*Wm. Simpkin*

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

*Standard Construction Corporation Limited.*

*Fitzalan House, Arundel Street,*

*London, W.C.*

No: 37.

October 28, 1903.

THOMAS A. EDISON, Esq.

Dear Mr. Edison,

Your two favours of the 12th inst. Nos: 21 and 22, were received last week, but I have delayed replying until I could go fully into it and also consult some of my people with reference to several points raised.

In the spring, when I was in Florida, we went all over this arrangement of hoppers for the Crushing plant, and both you and I made notes on a general drawing which I then had with me, and it was then decided that a hopper built out of heavy boiler plate, and properly reinforced, would be all right. The material also from which the various hoppers and chutes were to be made was discussed and agreed upon.

The position of the feed rolls was also taken up, and so far as the feed roll underneath the Giant is concerned, with its attendant agitator roll, you marked a few changes on the drawing and on my return here this was altered and a revised print, A.172 (a copy of which is enclosed) was mailed to you on May 22nd (letter No: 26), and as we got no reply we took it for

T.A.E.2.

granted it then met your views. I am requested to ask you to take the drawing A.172 herewith and mark on the same the exact positions in which you want these two rolls placed, and return the print with as little delay as possible.

I will change the big hopper above the Giants to a heavy cast steel one, and leave the upper part to be built of timber as at Stewartville.

*Answer*  
I will move back the feed rolls above the Giants although I hardly think that this is necessary as our feed roll has only a peripheral speed of 20 ft. per minute, and in some experiments which we have made with a small model, everything being to scaled size and weight, the rock falls from the feed roll in an almost perpendicular line. However, you wish it and so it will be moved back.

I enclose you another print 065, which please understand is a diagram only, and this will no doubt explain the agitator roll and the gap which you speak of, more clearly. It is the intention when running this plant that the men in charge shall always keep a certain amount of material in the bin.

*Answer*  
Let me take occasion to say that the class of labour which we shall employ in Norway is to my mind very intelligent and I do not anticipate much trouble in teaching them their duties.

There are many other points you have not quite understood, and I regret that I could not be with you when you were

*Answer*  
going over our drawings so as to discuss matters and put them in their proper light, but as I cannot be ubiquitous, we must do the best we can. However, as we are going again over all the drawings we will try and make them a little more understandable when next forwarding, and where we think any point will be in doubt, we will write particularly about it.

*see p 30*  
There is room everywhere for men to get in and clear out, and everything is properly held.

*OK*  
015. We have already used these rods and plates to draw on the centres at a pressure of over 80 tons. We simply marked 10 tons on the jack to show that it was a jack.

*B*  
I mail you two photographs which show some parts of our big rolls, and I want to say that a better job could not be built. I have personally seen every part of these machines, had all the bearing sleeves and other parts that should be interchangeable tried all around, made physical tests of all material - and am satisfied. The cost of these rolls which weigh 230 tons, is 4.8 cents per pound. I shall however give you a detailed list of costs of all the various parts of the machinery when the work is completed.

*No. 1000  
S. 1000*  
B.342. This drawing is only a diagram which was sent out to the various Car builders along with a letter stating our requirements, and we shall accept a car which has 6" x 12" oak underframe, 4" pine deck, all properly built with through longitudinal and transverse rods, heavy wrought iron angle

T.A.E.4.

brackets, etc. and with "main line axles", 4" x 8" in the bearing and 5" at the wheel seat: this should stand. I will not forget the extra pieces of timber on the top but will not fix these until we get the skips. I have decided to make the skips out of  $\frac{1}{2}$ " plate.

*Answered* C.136. I think we had better put the shield on the lower part of the hopper and not on the cover: see my sketch herewith.

*Not answered* C.137. No, we decided on cast iron: we will, however, make of steel. You know we agreed on putting in wrought iron wear plates at first and if found all right to renew them with chilled plates. This I have noted in my book; and I am also testing some pieces of manganese steel to use as wear plates which seems to stand very well.

*Not answered* E.269. Will use just an ordinary hand windlass with ratchet, as you suggested. I am sure the arrangements for removing all of the hoppers are strong enough, and I intend to shed them all over when in place, as I, with you, am sure they must be covered.

I will see that all nuts, etc. are properly fastened. This will be drilled into everybody in connection with the work so I don't think you need worry about it. I will also arrange for chilled iron wear plates, or manganese steel if we should decide to use this as before mentioned.

*Answered* I will send you a sketch of a gate slide that is working, and will work, no matter what the pressure is or what kind of material you are handling.

T.A.E.5.

*agmt to conference*

E.314. You have several times said you would send me a diagram of your delivery chutes at the bottom of the Dryer and for the last two rolls, but this you have not done.

With reference to these, and all other chutes, I am drawing them up and shall do as you and I arranged and as I thought you understood; i.e. to put in makeshifts mostly of wood and when they are found to be all right to put in the permanent chute; so when you get any of these drawings please criticise them from this standpoint only, and kindly suggest any changes, but don't worry about the weight of the chute or the manner of supporting as this we will take care of.

*Answer*

E.316. Some parts of this I do not quite understand. Before we left Orange we talked a good deal about this matter and you certainly suggested chilled plates as the wearing plates. Kindly say what you suggest now: we can put in anything, and I would say manganese steel would be a good thing from what I have seen of it. There is a large foundry here (Hadfield's) - the proprietor of which is considered to be one of the finest foundry men and metallurgists in the world, and I have seen some crushing plants made by them for crushing granite up to a capacity of 2000 tons a day, and they seem to be running along without any troubles. It is true that they are not handling stuff such as our Giant crushers handle, but pieces from about

T.A.E.6.

14" to 16" long by 12" square, and this manganese steel stands very well not only for the wear plates and the lining of chutes, but also for crushing plates.

*Answer*  
Of course I know that we could not use manganese steel for our crushing plates, as for one thing, it cannot be machined on the back, but I think we might use it where we can for wear plates, as this hard granite seems to have very little effect on it.

*Not done*  
About the bracing of the girders, etc. supporting the different rolls. I will send you a diagram showing this, and if you have any suggestions to make I shall be glad to have them, but when criticising again our hopper arrangement, don't bring in the supports as these are not thoroughly shown so as not to complicate matters.

*Not done*  
Now with reference to the Blowers, - This matter we have given a good deal of consideration, and I do not agree with you that we shall have any trouble if we do away with the connecting pipes from the top of the bins to the Blowers. Our experiments show us that the putting of them in gives us the trouble, for how are you going to put screens into these Blowers to equalise the blast and then blow the return dust through them. We have tried it, and it simply cannot be done, for it doesn't take many minutes running to so fill up the screens that the pressure is all kinds of ways and not regular. We are experimenting very carefully along this line with a Blower of the exact size which we shall use in Norway, and we will take all the



T.A.E.7.

*Not arrived*  
responsibility of its proper working, and will send you final drawings when everything has been fixed up, or I will bring them over with me on my next visit and get your valuable criticism.

With reference to the spiral casing, - this also is the result of trials and seems to give the best effect.

I have already sent you one of the small idler bearings, and will send you samples of the others when I have finished testing a few that have been made for me.

*Assumed*  
B.224. This bottom shaft is for the idlers which carry the empty belt only. I enclose you a print of our side idler B.246 (please note the date). We had already made the pulley 6" wide so I suppose this will do. You will see that we don't need to make them right and left as the two spirals oil perfectly no matter which way they go. I am running some samples which have been made for us and so far they have proved all right. The lateral thrust where we do not use a collar is taken up in the end of the bearing; this you will see when you receive one of these.

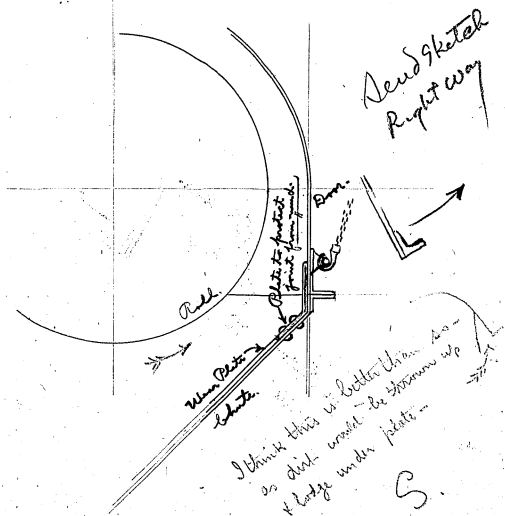
*Assumed*  
The Dryer drawings we will shortly send you.

Just as I was concluding this letter, one of the Directors came in and requests me to ask you what is the minimum and maximum life of the ropes on the fine grinding rolls.

Yours very truly,

*Wm. Simpton*

[ATTACHMENT]



*Standard Construction Corporation Limited.*  
ALL LETTERS SHOULD BE ADDRESSED:-  
**ENGINEERING DEPARTMENT.**  
*Fitzalan House, Abchurch Lane,*  
*London, W.C.*  
TELEGRAMS: STANCOLLI, LONDON.

No: 38.

*Hunter*  
October 31, 1903.

THOMAS A. EDISON, Esq.

Dear Mr. Edison,

On again looking over your recent letters, it has just occurred to me that with respect to drawings A.125, 126, etc., the diagrams of the general lay out of the various buildings, you may misconstrue these - particularly with reference to the conveyor work in the head house. Please note that in these drawings we have simply shown the locations and have shown no details of the bracing, etc. All this work is properly braced, both longitudinally and horizontally, and, as I think I have before stated, is at least 25% stronger than anything you have at Stewartsville.

I have been talking again to some of our people and I enclose you herewith a print which will show you how I am arranging the head pulleys for all the conveyors. This which I send you is for our widest belt and you will see is driven by two motors, both the motors and the gearing being in the dust proof houses which are open to the outside air for ventilation purposes. With the 24" belt we simply have one motor. The

T.A.E.2.

whole of these conveyors will be got up in this manner, and the  
bracing, etc. properly taken care of. Our Board is just  
now in session so I must leave the continuation  
of this until another day.

Yours very truly

Wm. Simpkins

*Standard Construction Corporation Limited.*

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

*Fitzalan House, Arundel Street.*

*London, W.C.*

No: 39.

November 7, 1903.

Dear Mr. Edison,

I have your favour of the 29th ult. and certainly am pleased to know that the Cement Plant is running in a satisfactory manner, and at the same time I am sorry that the "boom" has busted just at the time when you ought to be making something out of this business.

Everything is going along quietly here and we shall shortly be mailing you some more drawings. The trouble with the big cut at Mō still continues and the Directors want me to go out there as soon as possible and look over the ground, and I expect to leave here some time during the coming week so that if you do not hear from me for the next little while, you will know the reason.

Yours very truly,

*Wm. Simpton*

*Your advice that Cement plant is running will do good in the right place. S.*

THOMAS A' EDISON, Esq.

[NOVEMBER 11, 1903]

Letter # 23

Simpkins - 066

I do not believe in using two motors  
+ 2 sets gearing for ~~your~~ your heavy Conveyors  
~~you will have a standard motor~~  
~~One large motor~~ One large Motor with 25%  
more power than you will ever ~~need~~  
~~on standard~~ need, with very liberal width  
of gearing. Is what I advise from the  
Experience we have so far -

You can use a slow speed motor say  
450 R.P.M. - advise 24 inch on  
gear on head pulley + 14 to 16 inch  
for second - ~~If~~ You will make no  
mistake if you use very heavy  
shafts - flexibles are absolutely

Necessary with bearings on each  
side of pinion = Our flexible works  
perfect, You spoke about a flexible  
which ~~works~~ catches & drives without  
slack - We find this is a disadvantage  
by the slack we have ~~in~~ when we  
are shut down we can turn motor  
 $\frac{1}{2}$  revolution, fix brushes, clean  
commutator & feel for a bind - on  
our starting up system the motor  
starts slowly - Our gunny  
Chamber of 100 - with 50 Horse  
power 18 X 12, ~~with 3 inch clearance~~ is  
just right and temperature is kept  
within 20 degrees of outside

We were compelled to use three (3)  
thickness of gummy for inner wall  
& one for outside - to keep leaks  
down - with no dust or float  
we now have no trouble with  
brush sparking or glazing of fused  
dust, we have five inspectors  
Each man has a certain number  
of motors which he visits ~~to~~  
four times daily - He inspects  
for oil leaks, dust leaks, rubs the  
surface of Commutator a little  
with Crocus. cloth, sees brushes are  
OK - puts all tight & notes the  
temperature of thermometer



The result is our motor system is as near  
perfection as anything can be & we  
have no trouble except where there is  
jar - Now I want to impress on  
your mind the serious character of  
sharp jars shaking on motors

Where we have jars on motors we  
cannot keep the brushes from  
sparking as the jar is transmitted  
to them - the result is constant roughness  
of commutator & increase of spark  
& change of brushes - ~~etc~~ -

Even the Motors driving rolls should  
have flexibles. - I spoke to you  
about this once before,

The big  $1\frac{1}{4}$  inch wire rope  
flexible used as wobbler on  
3rd 36 Roller is all right you can  
make them to drive any amount  
of power - If you use outside  
~~air~~ <sup>air</sup> & draw it in by fan & force out  
through gunny look out that  
the air outside will not be  
very dusty on certain direction  
of the wind - Cement works  
got knocked out in two or three  
places where they did this  
& had to go back to old way

look out & have a very large  
shaft and ample bearings as  
well as many spiders on the  
big idler that serves to increase  
arc of contact of head pulley  
on Crowyons. We have had  
serious trouble here until we  
made them strong -

B-246.

Your upright side Idler should  
be one inch longer, to meet

Every Contingency

I am going over balance of drawings  
sent & will finish shortly -

Edison

Simplex

Below No 37 Read - You must have misunderstood  
me regarding the Hoppers for The Giant roll -  
+ when I suggested the use of sheet steel  
for hoppers of rolls in places of Cast steel  
it only applied to the finer crushing Rolls -  
As Hoppers on Giant + Intermediate Rolls  
were reconstructed three times each one  
stronger than the other at a cost to me for  
work, delay etc of over \$30,000. The requirements  
as to strength would not likely slip my  
memory - I prefer to hoppers above top of rolls  
+ sides - As to the hopper below Giants  
for storage that can be made of sheet  
steel + we agreed on that in Florida  
but the bottom I told you would have to  
be strong - You will not be able to depend  
upon the men keeping ore in the bottom  
to cushion blow - No matter how intelligent  
they are - any will construct which

2

has to depend upon the intelligence of  
the man will be a big failure - for things  
so if neglect comes nothing is ruined.

I will send you this week sketch of  
Giant Hopper at Edison & Rough sketch  
of my idea of Hopper for your giant,  
I refer to top & sides - also storage hopper, feed rolls etc

If you get <sup>no</sup> reply from a drawing do not  
take it for granted that it is all right.

~~Has A 1720 and a sketch of Edison~~

~~but we have not~~

You say that upper part of Hopper of giant  
at Steubenville is of wood - this is a mistake  
its of steel - the giant at Edison had wood -  
& its no good - build of steel -

Speed of feed roll above giants has <sup>very little</sup> ~~nothing~~  
to do with the trajectory of large pieces

Your experiment with small feed roll must have been done badly - a circle acts somewhat like an angle chute, from the time it starts to slide it moves down a circle & cannot possibly fall anywhere near perpendicular if it was wood or didn't slip it might but if iron & it slid then it forms a large trajectory. You remark that "However you wish it & so it will be moved back" Its not a question of my wishing it - its a question of getting it right & my data is based on actual working =

C 136 - Dirt will get in between door & hopper <sup>or show your data</sup> - the sketch we sent is best thing we have found - this sketch No 1 letter 21

4

C 137. I am sure 1st 5ft rolls should have  
Coast steel for hopper -

I think Manganese steel wear plates  
are good providing they will give more  
wear for the money

I await sketch of gate slide, we have used  
Every conceivable one & ~~not~~ not one worked  
permanently -

Will send you chute sketches this week  
bottom dryer & last 2 rolls -

~~B 316 Why do you need a detailed drawing~~

B. 316. I never remember suggesting chilled  
plates in upper hopper of grants, You must  
have misunderstood me - we never had them  
at Solson or Cement & there is no need of them

as wear on check plates only commences  
when you get to finer rolls,

Please take my notes in the spirit they are  
intended - I am only sending you criticism  
based on Experience in actual work  
with such conservative changes that will  
tend to eliminate defects now met daily

If you could spend one month at Cement works  
you wouldn't need any of my letters,

Our ropes last on Rolls from 26 hours to  
240 hours depending on state of the plates  
& evenness of feed, this is on Crushing  
Cement 90% through 200 mesh - with  
less pressure for Coarser Crushing life  
will be longer - when roll plates chip off



Load varies pressure & the severe on ropes.

~~P. 3.42 = Wouldnt it be much better if you would  
send your hand sketches (personally made) with  
dimensions; b.~~

~~P. 3.42~~ P. 3.246 = WE never had this drawing  
before - see last letter in re making much  
longer -

All drawings or parts approved by me  
finally are marked ~~sent~~ + with proper explanation  
are finally filed with the Sunderland Iron Ore  
Co. - & I will only be responsible for those  
things finally approved & filed with them  
of which there has been two parcels already  
sent -

Edison

*Standard Construction Corporation Limited.*  
ALL LETTERS SHOULD BE ADDRESSED TO:-  
**ENGINEERING DEPARTMENT.** *Fitzalan House, Arundel Street,*  
*London, W.C.*  
TELEGRAMS: STANCOLLI, LONDON.

No: 40.

November 22, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

I am duly in receipt of your favour of November 11th, addressed to my Father. He is at present in Mo, but I have forwarded a copy of your letter, and he will no doubt go into the same carefully, and communicate with you in due course.

Yours truly,

*Wm. Simpkins, Jr.*  
#

[NOVEMBER 23, 1903]

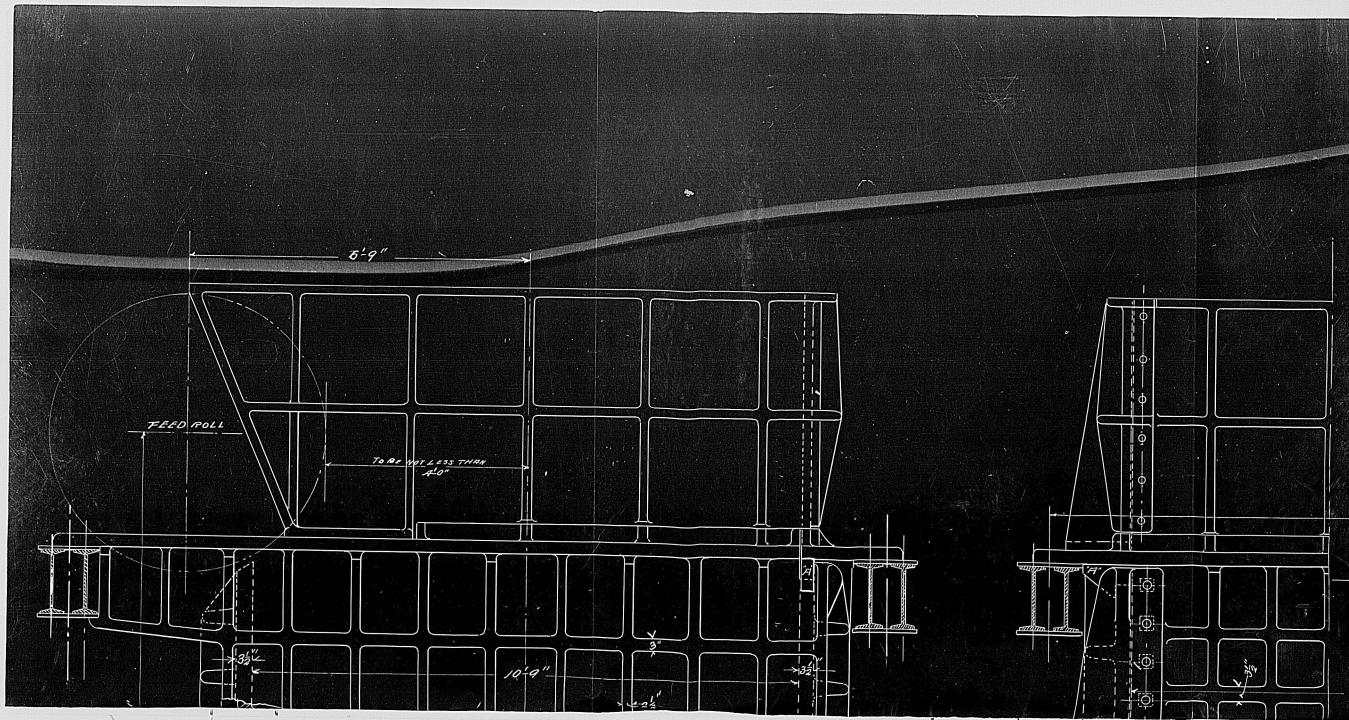
Simpkins, Ltr #25-

Wiston & please find B1728.  
showing Giant Roll Hopper as we  
had it at Edison, N. J.

Also ~~please find~~ <sup>Bkt</sup> ~~find~~ <sup>Prison</sup> Hopper  
for your 7'0 Roll - this will  
give you a general idea of character  
and strength of giant Hopper as it  
occurs to me from my experience

And Bkt showing Delivery Chute from  
3<sup>rd</sup> 36" Roll & conveyor #101. and  
from Dye & #102 conveyor as they  
are put in at Cement plant  
now. —

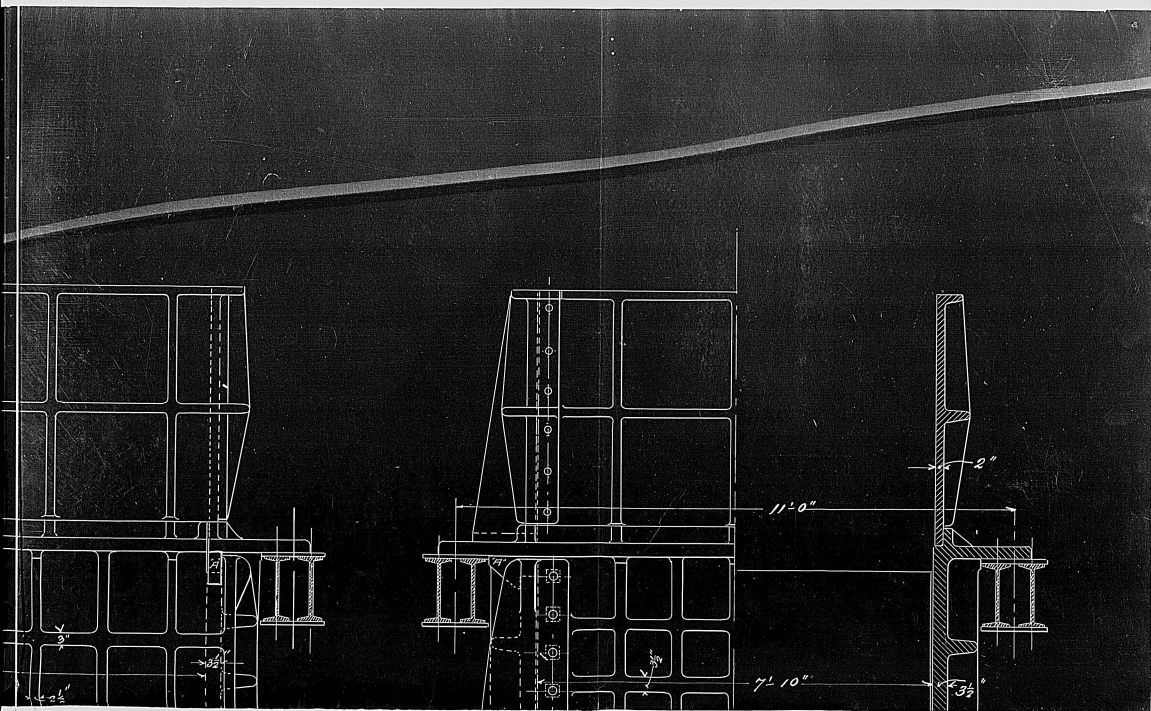
1	2
3	4



[FILMED IN SECTIONS]

1	2
3	4

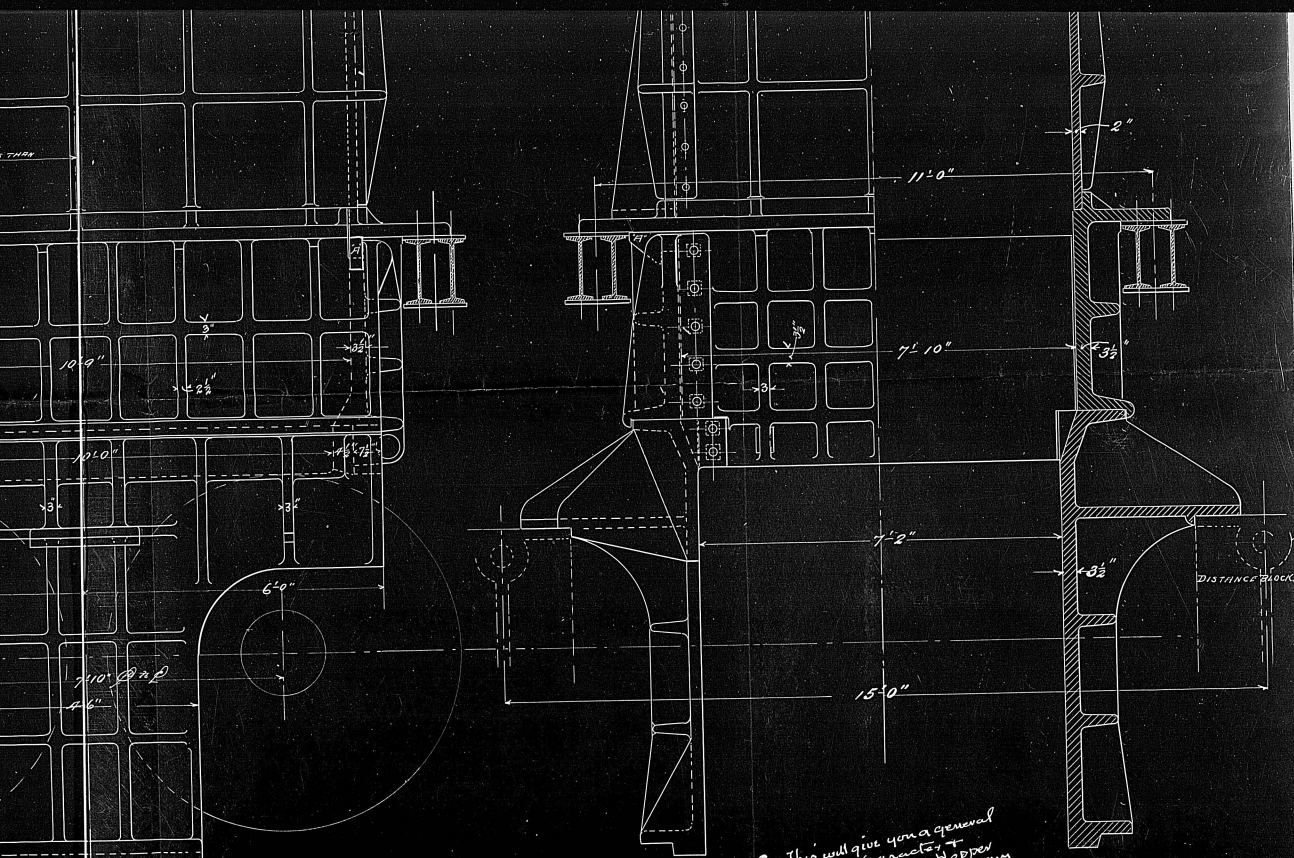
[ENCLOSURE]



[ENCLOSURE]

1	2
3	4





-ALL PARTS STEEL CASTINGS.-

S=This will give you a general  
idea of character &  
strength of Giant Hopper  
as it occurs to me from my  
experience.

PROPOSED HOPPER

FOR

7'-0" 7'-0" TOLLS

Edison

DUNDEE IRON WORKS LTD.

LONDON

ENGLAND

SCALE 3/4" = 1'

11-19-03.

[ENCLOSURE]

[FILMED IN SECTIONS]

1	2
3	4

*Standard Construction Corporation Limited.*  
ALL LETTERS SHOULD BE ADDRESSED:-  
**ENGINEERING DEPARTMENT.**  
*Fitzalan House, Arundel Street.*  
*London, W.C.*  
TELEGRAMS: STANCOLI, LONDON.

No: 41.

November 24, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

Your letter of the 16th inst., addressed to my Father,  
is duly to hand. I am forwarding a copy of same to him at Mo,  
and you will no doubt hear from him in reply in due course.

Yours truly,

Standard Construction Corporation Limited

*J. M. Simpson, Jr.*

*J. M. Simpson*



[NOVEMBER 25, 1903]

Simplex

Letter No — 26 —

I send you sketch of what I think  
is right way for Rotherford under giants  
I have made the little agitating Roll non-  
adjust-ble - leaving 24" clear which  
will be OK when your opening in  
giants is 16" from bottom to bottom.  
Allowing only 16" pieces to go through.  
There will be slivers longer but you will  
not have many & they will do no harm  
You will notice I have increased  
diameters of feed roll to 7 foot 4 in  
this will prevent a great trouble we  
had at Edison & which we  
now have at Canby, to wit.

The incoming ore hammers or pushes  
 the ore so much under certain conditions  
 that it is forced over when feed  
 roll is stopped & when feeding there  
 is an abnormal ~~the~~ load of ore  
 forced over each time they dump  
 when not much ore in & this  
 strains all the rolls below &  
 put a big load on belt. This <sup>increased</sup> strain  
 will stop this = The ~~roll~~ feed  
 Roll can be cast in 3 sections, it should  
 be thick & ribbed - The shafts  
 are none too large = We had shaft  
 at Edison on a 4 ft roll 6 7/8 shaft  
 & this got bent - We used removable

Connected plates, but if you make  
 roll of close grained iron  $+ 3$  or  $3\frac{1}{2}$   
 thick it will last a long while -  
 plates are a nuisance. -

You will notice I have put where  
 ore strikes a steel casting heavy  
 ribbed - you will need it as  
 men will not carry out instructions  
 about keeping hopper full -  
 Look out nothing projects in  
 bottom of hopper, a bolt head  
 sometimes starts a block -  
 very trivial things will do the  
 same -

~~Edison~~

4

I may mention that I think you  
will have to dispense with the  
wooden washer on end of  
bolts going through housing on  
great Roller because if it spreads  
you have very little  
clearance in your Engine  
Cylinders there will be  
trouble - There is no harm  
in leaving it out -

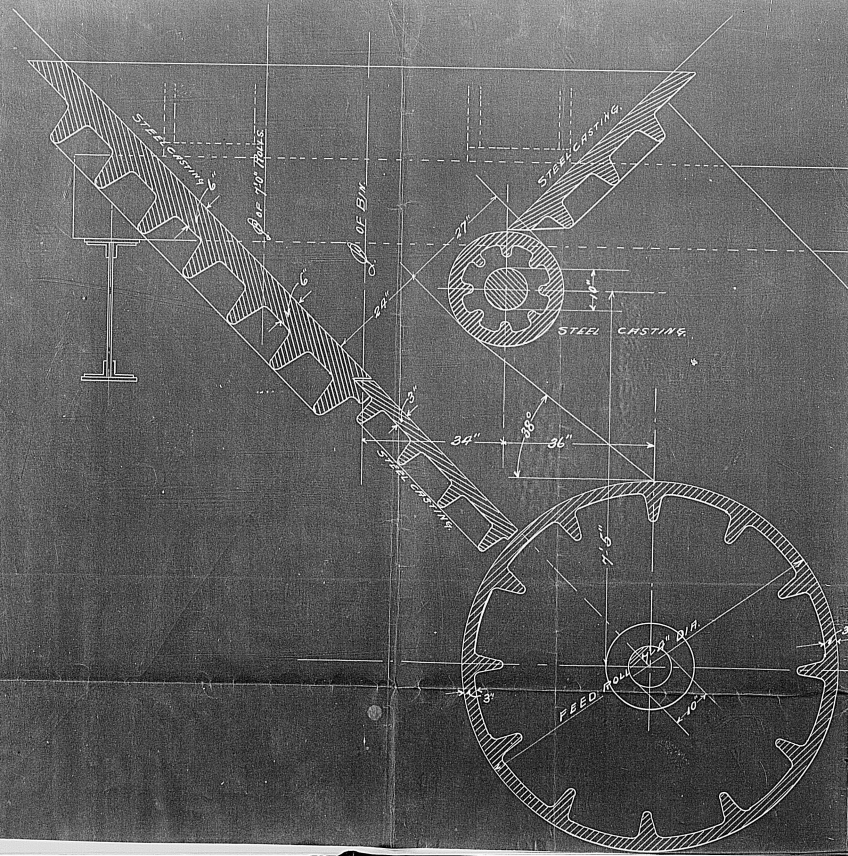
Edison

Dimpkins -

We have not received final  
drawings for 3 High rolls;

Edison

[ENCLOSURE]



SKETCH FOR FEED ROLLS  
-AT-  
BOTTOM OF STORAGE BIN.

11-23-03

11-23-03

*Standard Construction Corporation Limited.*

ALL LETTERS SHOULD BE ADDRESSED:-

**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANCOLLI, LONDON.

*Fitzalan House, Arundel Street.*

*London, W.C.*

December 1, 1903.

No: 42.

THOMAS A. EDISON, Esq.

*file -*

Dear Sir,

We are duly in receipt of your favour of the 23rd ult., and are extremely obliged for the enclosed blue prints giving us your idea as to the construction of the hopper around the 7 ft. Rolls, and particulars of the delivery chute to conveyors. We will take these up at once, and revise our drawings in accordance with them.

Yours truly,

Standard Construction Corporation Limited,

*Wm. Simpson, Jr.*  
*Wm. Simpson*

Letter #27 - Dec 2/03  
Dumplin -

I send you today blue

#1254  
Printers of 3rd 36 inch roll flexible  
W x 66er - This is a great  
success + gives no trouble  
repz is good for 20 to 30 000 times  
+ is quickly put in when  
worn out = It is very  
soft in transmission opening  
taking off shocks + I think



✓  
That its the only thing you  
Can use to take shocks  
off of Commutators of  
Motors driving rolls

B-1225 & B 1234 are the flexibles used on  
~~our~~ our Motors driving Conveyors etc

Leson



# 3  
Dimpkins -

Look out that Bergman uses  
Soft Mica in his commutators.  
Those sent from Germany for our  
Motors have hard white mica  
in & we have a dreadful time  
keeping machines from sparking -  
More than 12 percent of the whole  
Mill time is lost, the Mica after  
running 36 hours stands up slightly  
& with Carbon brushes, one thousandth  
of inch is sufficient to start a  
spark then the spark commences

to roughen the Commutator +  
spark increases, then it gets so  
bad have to shut down  
Sand paper — White hard  
Mica is OK for wire brushes  
but not for Carbon & its no  
longer used here —

Σ

Dimpkins — 5

The idler bearing you sent is defective in respect to oil chain it is absolutely essential that the chain should be easily put in & out while running - you will have to redesign it - There are other things also - I have it set up & am trying to make it oil etc will let you know further about it =

The skip dump motor must be compound wound -  
Edwin

*Standard Construction Corporation Limited.*

ALL LETTERS SHOULD BE ADDRESSED:-

**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANCOLLI, LONDON.

*Fitzalan House, Arundel Street,*

*London, W.C.*

No: (42)

*Harter*  
December 7, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

I am duly in receipt of your letter No: 26, dated November 25th, and am obliged for the enclosed sketch of a feed arrangement ~~over~~ the first five foot rolls. My Father should be back in London towards the end of the present week, and we will take this up with a view to arranging our drawings accordingly immediately on his arrival.

I am under the impression that drawings of the grinding rolls were sent you some time ago, but will look into the matter, and if I find that this was not done, will forward you a set at once.

Yours truly,

*Wm. Simpson, Jr.*

*Standard Construction Corporation Limited.*

ALL LETTERS SHOULD BE ADDRESSED:-

**ENGINEERING DEPARTMENT.**

TELEGRAMS: STANCOLLI, LONDON.

*Fitzalan House, Arundel Street,*

*London, W.C.*  
December 14, 1903.

No: 43.

THOMAS A. EDISON, Esq.

Dear Sir,

I am duly in receipt of your letter No: 27, dated December 2nd, with various blue prints of rope flexible couplings enclosed, for which I am obliged.

My Father has been delayed in Berlin on his way back from Norway, and will not reach London before Wednesday, the 16th. We will take the matters up which are referred to in your letter immediately on his arrival.

Yours truly,

*Wm. Simpkin, Jr.*

Standard Construction Corporation Limited.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

No: 44.

Fitzalan House, Finsbury Street,

London, W.C.

December 31, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

Your favours-23, 24, 25, 26 and 27, came duly to hand during my trip to Norway and were acknowledged by my son. *when I am over whelmed with work I do not unduly*  
They have been and at work incorporating, so far as possible, the suggestions made by you, particularly on the *your reference to five grinding*  
hoppers for the crushing plant, and here I must take occasion *to make as you do now but all*  
to thank you for the very explicit sketches, etc. you have for- *Explanations, you will be*  
warded. Just as soon as these drawings are completed, they will *intended to know that one*  
be sent on to you. *of our 12 inch iron shafts*

I note that the lower end of the delivery chute from the *on five grinder draped in*  
last 36" to the conveyor, and from the dryer to the conveyor, is *two parts. We use a*  
exactly like what I suggested to you quite a long time ago and *removable plate put on a*  
which you at that time said would not work as it would block up. *new rope in 40 minutes so*  
I have before me now a copy of the sketch which I made at the time *do not understand how to make*  
and it differs in no material respect from the sketch which you *about not being able to do it*  
now send, and which is really the method used by most builders *2*  
of conveyors, and I am certain will be satisfactory.

I note what you say about dispensing with the wooden washer on the end of the bolts going through the housings on the

Giant Rolls. This we had already arranged to do for the reasons stated by you, as also on the last 3 sets of 5 ft. Rolls.

I am mailing you a photograph of a set of Fine Grinding Rolls which we have just erected and which we shall shortly test for efficiency, power, etc. against a set of Rolls of exactly the same size and with the same kind of plates. I will let you know the result as some outsiders who are building Fine Grinding Rolls with corrugated plates claim they can get exactly the same results with the same size rolls, and that the Rolls cost originally much less and there is no trouble from breaking of the pressure ropes. In this connection would say that the putting in of the loose plate between the couplings does not allow us to get in an endless rope when the one in use breaks. We have also to arrange to get it over the sheave of the pulley attached to the air cylinder, and this little problem we are now working on.

I expect to be in New York about the first week in February and may probably bring with me the revised drawings of the chutes and hoppers for the crushing plant, and other drawings which I wish to discuss with you. You might kindly let me know when you intend to go to Florida so that I can time my visit accordingly.

Wishing you the compliments of the season, I am,

Yours very truly,

Wm. Simpson



**EDISON ORE MILLING SYNDICATE, LTD., AND RELATED COMPANIES  
BOUND VOLUMES**

These records cover the period 1900-1908. They consist of letterbooks, experimental notebooks, and other bound items relating primarily to the design and construction of the iron concentration plant in the Dunderland region of Norway. The two letterbooks contain outgoing correspondence by Edison and Herman E. Dick pertaining to the Dunderland project, storage batteries, and cement. Included are instructions from Edison to draftsman William Simpkin regarding the plant and machinery at Dunderland, as well as some comments concerning briquettes. A volume labeled "Experiments" was used primarily by an unidentified author for notes, drawings, calculations, and reports relating to experiments with ores. It also contains one page of notes and calculations by Edison pertaining to a sight-feed experiment. Another volume, used primarily by Simpkin, consists of cost estimates for construction and equipment at the Dunderland works. A third volume, used primarily by Edison, contains notes and drawings concerning the construction of the Dunderland works and operations at Edison's cement works in Stewartville, New Jersey.

#### Letterbook, LM-281

This letterbook covers the period September 1900-February 1903. Most of the correspondence is by Herman E. Dick; some letters are by Edison and others by John F. Randolph. Included are items relating to the organization, capitalization, and operations of the Edison Ore Milling Syndicate, Ltd., and to the design and construction of its iron concentration plant in the Dunderland region of Norway. Also included are numerous letters pertaining to the development of Edison's storage battery and to Dick's role as foreign agent for the battery. In addition, there are items dealing with the organization of the Edison Portland Cement Co. and the construction of the cement works in Stewartsville, New Jersey.

#### Letterbook, LM-282

This book covers the period April 1902-January 1908, with most of the letters dating from 1902-1904. The letters consist primarily of instructions, sometimes accompanied by drawings, from Edison to draftsman William Simpkin regarding the plant and machinery at Dunderland. Some of Edison's comments pertain to the receipt of Dunderland briquettes at West Orange and to plant operations at the Edison Portland Cement Co. in Stewartsville, New Jersey. There are also letters concerning drawings from the New Jersey and Pennsylvania Concentrating Works.

#### Experiments (1899-1900), Cat. 999

This book covers the period November 1899-May 1900. It contains notes, drawings, calculations, and test reports relating primarily to experiments conducted by James B. Ballantine on ores. Most of the entries are in the hand of an unidentified author, but there is one page of notes and calculations by Edison pertaining to sight-feed experiments. Another note regarding the price and consumption of soda for briquettes bears the initials "T.A.E." Also included is a report entitled "Report of Cement Arch Test No. 3," along with notes concerning a "hematite machine" for Dunderland ore.

#### Cost Estimates (1901, 1907)

This book covers the periods November-December 1901 and February 1907. It was used by draftsman William Simpkin and unidentified authors. Most of the book consists of tissue copies of construction and equipment cost estimates for the Dunderland works (1901). A few pages, dating from 1907, relate to pattern drawings and the cost of installing giant rolls at the New Jersey and Pennsylvania Concentrating Works and the Carnegie Steel Co.

#### Standard Construction Corporation, Ltd. Pocket Notebook (1902-1904)

This pocket notebook was used mainly by Edison, probably during the period 1902-1904. Included are notes and drawings pertaining to the design and construction of the iron concentration plant at Dunderland, Norway, and to operations at Edison's cement works in Stewartsville, New Jersey. Many of the pages contain references to Edison's correspondence with William Simpkin, chief engineer of the Standard Construction Corp., Ltd.

#### Standard Construction Corporation, Ltd. Notebook (1903) [not selected]

This notebook was used during October 1903 by an unidentified author, possibly Emil Herter, for notes regarding blueprints for the Dunderland plant.

**Edison Ore Milling Syndicate, Ltd., and Related Companies  
Letterbook, LM-281**

This letterbook covers the period September 1900-February 1903. Most of the correspondence is by Herman E. Dick; some letters are by Edison and others by John F. Randolph. Included are items relating to the organization, capitalization, and operations of the Edison Ore Milling Syndicate, Ltd., and to the design and construction of its iron concentration plant in the Dunderland region of Norway. Also included are numerous letters pertaining to the development of Edison's storage battery and to Dick's role as foreign agent for the battery. In addition, there are items dealing with the organization of the Edison Portland Cement Co. and the construction of the cement works in Stewartsville, New Jersey.

The front cover is labeled "Personal Letter Book of H. E. Dick." The book contains 500 numbered pages and an index; it has been used to page 355. Pages 91-92 have been removed from the book. Approximately 40 percent of the documents have been selected. The unselected letters pertain to ore analyses, inquiries about Edison's storage battery, and Dick's personal business and family.

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Sept. 25, 1900.

Mr. J. Hall Jr., Secy.  
Edison Ore Milling Syndicate Ltd.,  
7 Amberley House,  
Norfolk Street,  
London W. C., England.

Dear Sir:

I have just cabled you as follows:

"Obsession, London.

We are astounded at allotment. I consented increase  
fifty and issue of twenty only. Dick"

Mr. Edison's allotment letter was handed him after I  
came over this morning, and we at once saw that instead of issuing  
£20,000 (pounds) of new stock, you have allotted the whole increase.  
What reason do you offer for this? Messrs. Lawrence or Wallace  
never suggested such an amount.

You first talked of issuing debentures to carry on our  
prospecting in Norway and I said we would take our proportion.

Mr. Wallace afterward said the Syndicate at the present  
time did not have proper property upon which to make such an issue,  
and suggested increasing our Capital Stock.

An estimate was then made up of what monies the Syndicate  
would require to complete its work of prospecting in Norway, and  
£12,000 (pounds) was found to be an outside figure.

#2 J. H. Jr.

Shortly before I left London for Paris, the Directors of the Syndicate held a meeting lasting several hours, and it was agreed to submit a resolution to the shareholders for an increase of the Capital to 150,000 pounds and of this 50,000 pounds, 20,000 pounds was to be allotted to the shareholders of record. No other figures or amounts were mentioned. All agreed that 20,000 pounds was more that could be used but we wanted to be on the safe side. The reason the increase was made 50,000 pounds instead of 20,000 pounds was that Mr. Lawrence said that at some future time we might want to make a further issue, and we did not want to go through this matter of increase again.

We did not exploit this business abroad to furnish the patents, experience gained by excessive expenditures in experimenting, and a great proportion of the Capital also.

During the interval between the meeting of Directors above referred to, and the receipt of Allotment letter today, no one has suggested to Mr. Edison or myself that any change was contemplated in what was agreed upon that day. Capt. Pollen did not mention it while here. Concluding I will say that there is no demand upon the Syndicate for any such sum of money.

Truly yours,

29 Dec

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4  
Sept. 25, 1900.

Messrs. Maguire & Baucus,  
5 Warwick Court,  
High Holborn,  
London, W. C., England.

Dear Sirs:

Mr. Edison has handed me your letters of July 27th, Aug. 2nd, Aug. 22nd and Aug. 24th. You are now aware of the cause of delay in Custom House of pug.

Mr. Edison has been and is now working on pug process, and says that the character of this pug is entirely different from the first lot. The grain is a thousand times finer, as fine as butter and the most powerful microscope does not resolve it into anything. It is also very lean, some carrying no gold whatever and much of it will not go over fifty cents per ton. All of these experimnts take time, and a small model plant will shortly have to be designed and of course this will involve considerable expense.

Mr. Edison says that if you run down the report that another process is out which is a success on the pug, and find that it is true, he will suspend this work and further says that whoever has solved the problem is justly entitled to all he can make out of it.

The information concerning the Sulphides is too general.

#2 H. & B.

A process that would work one deposit successfully might fail on another. The plan to work on in this line is to take a large known deposit, get average samples and fit the process to it. Give price of coal, labor and specific local information. Every detail in a process must be carefully worked out and all this takes time and money.

You see when wild statements are made how it works out. You brought that sample of pug over and said it was a rich sample but there were millions of tons that would average \$8.00 per ton. When a quantity is received for experimental purposes, Mr. Edison finds it entirely different from what was first shown him. The result is that all the work he has done with the first samples is useless unless you can find a large body of similar pug. He is obliged to begin all over again on the process, and the problem now is a hundred times more perplexing, although he believes he can overcome these new difficulties even now, but the pug must go more than fifty cents a ton.

Trusting I have ourselves clear on all points, I am,

Yours truly,

*H. G. B.*

Oct. 8, 1900.

J. Hall Jr., Esq.,  
Secretary Edison Ore Milling Syndicate, Ltd.,  
7 Amberley House, Norfolk Street,  
London, W. C., England.

Dear Sir:

I have just returned this morning from a trip in the mountains where I could not be reached by Mr. Edison, and find your cable of Oct. 1st. I cabled you on Sept. 24th upon receipt of your letter of allotment and waited one week for a reply, then was obliged to start on trip. I also wrote you the same day.

There is considerable humor in the way you request Mr. Edison and myself to put up \$110,000 as though it were an invitation to dinner, and I will say that the whole matter of this issue seems to me most extraordinary after settling on an issue of 20,000 when I saw you last. You have raised it to 50,000 without a suggestion or an inquiry as to how we stood regarding it.

We will do just what I agreed when I saw you and no more, that is to take our proportion of an issue of 20,000.

Very truly yours,



Oct. 8, 1900.

James Dixon, Esq.,  
81 Gracechurch Street,  
London, E. C., England.

Dear Sir:

In the printed report of the Extraordinary General Meeting of the Edison Ore Milling Syndicate, Ltd., on the 7th of Sept, page 20, I note a statement made by you which reflects upon my associate Herman Ernest Dick, as well as myself. You say that one of "my men" at a Club in Chicago introduced you to Mr. H. R. Dick who said "that he alone had to do with Mr. Edison's affairs." You also said that he seemed to be a most mysterious person. In the first place I will say that I have no man in Chicago. My Dick is a resident of Chicago although he spends but a small portion of his time there and was in London at the time of your visit.

Your Mr. H. R. Dick I never heard of, never had any business relations with him, and he is in no way connected with me.

I would consider it a favor if you would advise me the name of the gentlemen whom you called "Edison's man," who made you acquainted with this H. R. Dick.

Referring to your statement that you could not see me while in America, I will say that there are on file two letters from you only.

In the one dated Tuesday May 1st enclosing Dick's letter of

#2 J. D.

introduction, you say that you are leaving the next day for the South to be absent for four weeks, giving your address in Baltimore until the following Friday. I was away from Orange all that week returning Saturday Evening, consequently could not write you in time.

The other letter was received Tuesday June 12th and in it you say you regret that you will be unable to call as you are sailing the next day on the "Oceanic"

I have met several members of the Syndicate and have always been glad to talk over our affairs and should have been pleased to have seen you. One thing more; I can find no one who ever received a telephone message from you.

Trusting you will see the justice of my making this statement, both on Dick's account and on my own, I am,

Yours very truly,

6

19

October 11th, 1900.

J. Hall, Jr., Secretary,  
Edison Ore Milling Syndicate,  
Ambley House,

Norfolk Street, Strand,  
London, England.

Dear Sir:-

The ore shipment made by Lehmann is in the New York Custom House and has been there for three weeks. It will probably be two weeks longer before we can get it out. All of it is assayed and tested by Government Chemists, ostensibly to see that no fraud is practiced upon the Government, but really to furnish good positions for party workers.

Edison must construct a unit of that type of separation device as would be used in the Norwegian Mill and actually concentrating the ore sent. As this will involve considerable expense, and he desires you to instruct him at once to do this work.

I notice in the reading of the report of the extraordinary general meeting, that few, if any, of the members of the Syndicate have the remotest idea of this problem. For instance- Mr. Dickson was surprised to hear that they were not using Edison briquettes in Chicago, a thousand miles away from Edison's Mill; within a few hundred miles of the great Masaba deposits and practically water navigation all the way to the Mines. Then he was surprised that he could not find them in use in Pittsburgh, where practically the same

J. Hall, Jr. #2.

conditions exist. The Chairman gave a partial explanation of the problem, but it did not go quite far enough.

There was a great deal made at the meeting of what the briquettes cost Edison per ton and what he gets for them. What it costs to produce briquettes of 88% iron per ton, from ore containing 16 to 18%, is a vital one to the Syndicate. The price he sells them for cuts no figure whatever. There is a fixed price for Bessemer ore at every Port in England; the same as the price of wheat, cotton or any other commodity; so all that the Syndicate is interested in knowing, is what the briquettes cost. What Edison makes or loses here in a Country that is exporting hundreds of thousands of tons of Pig iron, steel, billets, ore and everything *in the iron line* else, cuts no figure. You have your market price, which is considerably higher than it is in this country and you know what Edison can make negotiating for at the prevailing rates for wages; then the problem becomes an easy one to figure as to profits.

The Iron industry in this Country is in a most demoralized state. During the past twelve months when the price of iron was kept artificially high, every Furnace throughout the East - many of them not having run for ten years, was put in blast and huge quantities of ore contracted for on the supposition that the price of iron was likely to remain high for several years. There is no

J. Edgar J. #3.

market for either iron or steel at the present time; practically all the Furnaces are closed and it is not a question of price, quality or anything else. The Furnaces simply cannot take the ore.

Edison has on hand to-day about 10,000 tons of briquettes and concentrates and is shipping them out at the rate of about 300 tons per day. He has taken advantage of this lull in the business to put in thirty-four Electric Motors in his plant.

This condition of affairs will probably not exist again for fifty years, but it is the condition at the present time. Carnegie threatens to make war upon the rest of the iron men, and I believe he will do it. It looks that way. He proposes to cut the price of steel rails to \$23.00 per ton and everything else in proportion.

It is Mr. Edison's opinion that the ore situation will be so improved that he can start up on January first and run on continuously. In fact, he has been assured of this by Pilling & Crane, his ore brokers.

Yours very truly,

J. P. G. L.

Nov. 2, 1900.

Messrs. Maguire & Baucus,  
5 Warwick Court, High Holborn,  
London, W. C., England.

Dear Sirs:

Yours of Oct. 10th has reached me here. I have been East for several days with my family, but did not come over to the Laboratory until this morning. The letter I wrote you on Sept. 28th was sent after a long talk with Mr. Edison and after he had shown me many samples of the pug which he had received from you, and he ~~soon~~ the letter after it was written. He has since that time found a new feature in the pug which he could not see in the samples first submitted by Mr. Roubush, and that is this; The greater portion of the ore has nothing whatever in it, but when it is broken there appears to be, however, small spots widely distributed through the pug where the gold is segregated and it was these pieces of rich ore that Mr. Roubush handed him.

He went over the greater part of the shipment, breaking up the pug indiscriminately without finding an atom of gold, and it appears that all of it must be treated to recover the gold instead of the richer parts as he first thought. On Monday he commences on another experiment with the pug and I hope to be able to give you encouraging reports soon.

Very truly yours,

H. E. Lick

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16

Nov. 2, 1900.

James Dixon, Esq.,

81 Gracechurch Street,

London, E. C., England.

My Dear Dixon:

Mr. Edison has handed me your letter of the 22nd of Oct. and I note what you say. I am obliged for the way in which you mention me, and can readily see how the reporter made this error, as you yourself say you do not understand the disconnected way in which it was printed.

I presume the gentlemen you met in Chicago was Samuel Insull who I have known for many years. Mr. Edison does not want you to think that he was finding any fault with you, but says he wrote the letter simply to straighten out any misunderstanding that might arise from the reading of the report.

Very truly yours,

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23  
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November 8th, 1900

Mr. J. Hall, Jr., Secretary,  
Edison Ore Milling Syndicate,  
Amberley House,  
Norfolk Street, Strand,  
London, W. C.

Dear Sir:--

Mr. Edison has received your cable and has already started at work. After a few preliminary general experiments with the apparatus he has previously constructed, he will design and build a bank of ten magnets, which will be a perfect unit of the type as would be constructed for the Mill in Norway; then this bank of magnets can be shipped to London and there demonstrate to our friends at Newcastle, who doubt that the hematite can be separated in a commercial way.

In the meantime, what do you propose doing with Dr. Lehmann? If he can be spared it seems to me it would be just the thing to send him over here that Mr. Edison can refer to him regarding the deposit in many ways. It was our first intention to complete this bank of magnets and then have Capt. Pollen come over, so that he might see for himself just how it was done, but this morning Mr. Edison



November 8th, 19

#2.

suggested that we ship this experimental unit of magnets over to you, together with the pulverized ore etc and I consider it a very good suggestion. He will keep right at it until the work is completed, as the time is now close at hand when something must be done and the chief object of this experiment is to obtain data for the prospectus, as well as make an actual demonstration of the separation.

We will send very shortly, a draft for part of the amount we agreed to take and this will be followed by other drafts at short intervals, until we have paid up in full the amount of the new issue that I agreed we would take when last in London.

Yours respectfully,

November 16, 1900.

Mr. F. H. Pollen, Manager,

Edison Ore Milling Syndicate,

Amberley House, Norfolk Street,

London, W. C.

Dear Sir:-

I have the Secretary's letter of October 30th to Chicago; your letter of November 2nd. and Mr. Edison has just handed me your letter to Mr. Mallory of the 5th of November, asking me to make a general supply to same, and upon Mr. Mallory's return in about two weeks, every item will be taken up and answered fully by him.

There is one building here devoted to the experiments on the Norwegian ore, and this work is being rushed forward without delay. I doubt if it would be possible to have Mr. Edison go over between now and April first, although he has frequently expressed his desire to see this deposit before the final location of the Mill was selected.

Mr. Edison says, he believes from all the data and reports which he has at hand, that the supply of ore in this one deposit would be sufficient to satisfy the entire English market for foreign ores for thirty years, at its present rate of consumption.

Of course, I realize it would be a happy thing for the

Mr. F. H. Pollen #2.

Syndicate, if Mr. Edison and myself would contribute \$100,000 just now, but as you know, this was not the spirit of the contract when the Syndicate was formed. However, we will contribute the amount previously agreed.

Mr. Edison is desirous of having me remain here during the experiment with the ore, so that I will have a clear understanding of the whole matter; and as there is little to be done just now, until we have our reports, etc., there would be nothing gained by my leaving at the present time.

There has been some delay which was not anticipated when the Syndicate was formed, but no more than is usual with other enterprises of such large possibilities. I realize that you must depend upon us for sound statements that will speak for themselves, and be of such a convincing character as would interest investors. We are fortunate to have at Newcastle, associates who realize the possibilities of this great deposit, and we will undertake to furnish the connecting links which will be convincing beyond a reasonable doubt.

I note what you say about the Norwegian patents and the great stress laid upon this one feature of the promotion. If the

Mr. F. H. Pollen #3.

deposit together with the process is secured, with the experience gained from this side, the business would be established of as firm a foundation as any other business existing to-day.

I have had a long consultation with Mr. Edison regarding the general lines, on which in our opinion a Company should be brought out. In the first place, the Company should be large to ultimately handle this business; that is, I mean with capital enough subscribed to build the Mill, Railroad, etc., etc., but for the present, only enough to be called up to secure the necessary money to complete the purchase of the property.

I notice that you speak about the plans for a Mill, and want to advise you what must be necessary to complete perfect plans. In the first place, a wooden model must be constructed here, perfect in every detail and similar to the one made for the Edison Portland Cement Company. This would cost about \$10,000. Then, detailed drawings must be made (this work would be done here in connection with Engineers that would be sent over by you) and this work would take at least eight or nine months and cost \$30,000 or \$35,000.

You must remember that the Mill at Edison is an experimental plant only; that it is like the first machine brought out by an Inventor in any new line; that it has been evolved from

Mr. F. H. Pollen #4.

nothing and changed repeatedly. Even now, there is being installed at Edison, thirty- four electric Motors to take the place of belts, and all the frame work is being replaced by steel and solid masonry; and this plant was made simply to demonstrate what could be done. Outside of this plant at Edison, the only new plant is the New Jersey Zinc Company, which is giving the very best of satisfaction. Figures will be furnished by Mr. Mallory on his return, which would be convincing to anyone accustomed to assuming ordinary business risks.

Mr. Edison has never considered this plant any more than an experimental Mill, being the first of many Mills to be erected for working the low grade rock of New Jersey, of which there are over sixty-five square miles; neither have I ever made a statement which could be construed into meaning that this was a going business, making large sums of money. It is the men who get into a business at its incipieny, who get large returns. I believe that with the reports, statements, etc., the workings of this plant at Edison, which I will be able to bring over, will satisfy the men of large affairs, who are the type of men we want in this enterprise.

Mr. F. H. Pollen #5.

Every condition at Dunderland is more favorable than at Edison, and the deposit is more than twice as rich, so that only one half of the material will have to be handled, with cheaper labor, etc. and the ultimate utilization of water power as compared with the plant at Edison. Rest assured, that we realize the magnitude of this proposition, and will furnish you what is required from this side.

We are glad to hear from you frequently and hope you will suggest anything that you may consider would be of assistance.

Yours very truly,

November 13, 1898.


Mr. Melville E. Stone, General Manager,  
Associated Press,  
Chicago, Ills.

Dear Sir:-

Enclosed I hand you a clipping from the New York "Journal", and beg to say that this man, Gourand, is in no way connected with me, I having dismissed him for good reasons many years ago. He has a genius for getting himself mentioned in the Press, and especially through your different foreign correspondents.

These publications are annoying to me and I trust you will use your best endeavor to have any future items of this kind suppressed.

My foreign representative for some time past, has been  
Mr. Herman E. Dick, of your City.

Yours very truly,  


Enclosure.

January 7, 1901.

The Battery has one third the weight of the present battery used in Columbia Automobiles.

The cost per Automobile will be less than those now used.

The Battery is based on an entirely new reaction in Chemistry and contains no lead.

The Battery is permanent. There is no deterioration.

It does not require any attention after being put in use, and nothing but water needs to be added from time.

Required- A cash payment,

33 1/3% of the Common Stock.

I Reserve the right to manufacture on a 20 per cent basis over labor, materials and general factory expense. At expiration of one year and having ascertained costs, I am to receive 1/2 the saving that can be made above this, which is to be added to the 20%.

Parties taking over the Battery do so under a license, the title for litigating purposes remains with myself.

Battery to be sold to all Comers at a rate not exceeding 50 per cent above cost to Company. I on the other hand to include all improvements on Automobile batteries for 5 years. To invest sufficient money in factories to supply the market, up to 10,000 automobiles the first year and any amount the second year.



January, 16th, 1901.

Walter H. Wilson, Esq.,

Buckery,

Chicago, Ills.

Dear Mr. Wilson:-

On my return, I find matters have changed considerably. Last week a delegation of Philadelphia people who organized the Edison Portland Cement Company, came over and spent a day, and made Mr. Edison outright a very liberal proposition to take up the promotion of the storage battery. I talked over with him my idea of placing two tenths of the capital stock of the proposed storage battery company in the West, and told him the nature of my conversation with you and Mr. Mitchell. He did not think it was necessary to place all or half in the West, but said that he would be glad to consider when the time came for bringing out the matter.

The Philadelphia people who were here, were very liberal with Mr. Edison on <sup>the</sup> ~~a~~ proposition of the Edison Portland Cement Company.

The Cement Company's capital is eleven million, of which two million is preferred and nine million is common. The whole of the nine million common was given to Mr. Edison outright, in payment of his patents, experience, etc. One million preferred has been sold and the money placed in the Treasury, and out of Mr.

Mr. W. H. Wilson #2.

Edison's nine million, he gave one million of the Common to the investors and purchasers of the million of preferred.

There is now in the Treasury one million preferred and one million of Common, which Mr. Edison gave up from his portion. This left Mr. Edison with seven million Common stock, with one million each of Common and preferred, stored in the Treasury. Out of these seven millions Mr. Edison received, he paid commissions, etc., the balance belongs to him absolutely.

His idea of a Company is somewhat on the lines we talked, as regarding the amount of capital stock. Everything is progressing splendidly, but it is doubtful that Mr. Edison will want to do anything until his return from Florida, when all tests, etc. will have been completed. He is pretty well tired out, having worked until midnight every night for weeks, and wants to get away for three or four weeks about the middle of February. When I return to Chicago, I will show you some memorandums Mr. Edison has given me.

With kindest wishes, I am,

Sincerely yours,

*W. H. Dick*



February 4th, 1901.

Herman E. Dick, Esq.,

Dear Sir:-

Referring to Clause fifth in the Storage Battery Contract, executed on February first, 1901, myself being the party of the first part and you the party of the second part, it is my understanding that the said fifth clause in said contract obligates me to assign said patents and applications for said storage battery patents to the proposed Company for all time, and in addition to such assignment I propose to give said Company without charge all my improvements thereon for a period of five years.

Very truly yours,

Thomas A. Edison

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Feb. 6, 1901.

My Dear Mr. Wilson:

Your letter of Jan. 12th to me care Waldorf - Astoria, New York was held by them for almost three weeks, and then forwarded to my Chicago address. From there it was again sent on to New York to me at the Reform Club and just reached me. Mr. Edison is strongly opposed to forming a large company when he commences the manufacture of his battery. He says that might come later when he has known results, and when he can show what he has done.

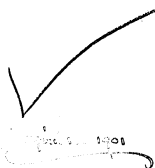
He has notified the Electric Vehicle Company that he has decided to keep the battery, therefore he could not give them an opportunity to investigate it. He proposes to begin the manufacture of the battery about June 1st. He has decided on the above mentioned lines, according to what he says is in his judgement the best plan for him to adopt. He considers my interest in the foreign patents of such great value, that it is not necessary for him to consider me in the American end of the business.

I have been expecting you would be down to New York before this. I have to be here at least another week, but am spending most of my time in New York. Capt. Pollen Manager of our London Syndicate is here and my time has lately been occupied with his business. Shall soon have to go abroad again, and I dislike to undertake the trip at this time of the year.

With best wishes to you and yours, I am,  
Very truly yours,

*H. E. Dyer*

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E Windsor Richards Esq.

Holland House  
New York City

Mr Dick who has just returned, tells me that  
 you are to come to the laboratory, I shall  
 be delighted to see you Monday night, You  
 can bring any friends with you, and  
 I shall ask you to do me the favor of  
 giving me a lecture of Monday will be  
 a convenient day for you to come. Mr  
 Dick will call at your hotel about  
 nine o'clock for you.

Yours  
 Thomas A Edison

2 3  
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✓  
April 18th, 1901.

Capt. F. H. Pollen, Manager,  
Edison Ore Milling Syndicate,  
4 Amberley House, Norfolk Street, Strand,  
London, W. C.

Dear Sir:-

I cabled on Monday as follows: "Important news; don't  
"exploit new Company or talk until letter received. Cable order  
"Edison make tandem magnets."

This decision was arrived at after a long consultation  
with Windsor Richards, Arthur Keene, Mr. Edison and myself, and it  
was only after I personally guaranteed that nothing would be said  
outside of the Syndicate office, Mr. Lawrence and Mr. Wallace, that  
I was allowed to go as far into the matter as I am about to do.

In the first place, this is a great business and we cannot  
plunge headlong into the matter of finding the money for this  
Company, without being armed with the necessary weapons. If we do, we  
run great danger of disaster, and it would be a most difficult matter  
to pull ourselves together if this did happen.

What we need is an explicit detailed report from Windsor  
Richards and this cannot be obtained until Mr. Edison completes his  
bank of magnets, which will take between five and six weeks to  
complete. He does not want to go ahead on this, (although he has  
made a sketch of what it shall be) until he gets your authority by

Capt. F. H. Pollen #2.

cable, so that at no time in the future can there be any misunderstanding about the order. He estimates that this bank will cost about \$5,000.00, as per his previous letter.

Mr. Richards and Mr. Keene left on Monday evening in Mr. Schwab's private car for Pittsburgh, where they will remain for about ten days and then go on to the Birmingham district in Alabama, returning to New York in about two or three weeks. On their return, this business matter will be taken up seriously and I believe the financial arrangements can be practically completed subject to the approval of the Syndicate. Mr. Keene pledged himself to us that every penny of money wanted for this enterprise can be easily and cheaply found in London. What is wanted, is a great Iron Master for Chairman of the Company and I have been assured that we will have no difficulty in having this arranged in a satisfactory manner. Mr. Edison's idea and mine also, is to get a great Iron Master for Chairman, having a strong board to co-operate with him, and then the Syndicate members doing everything they can to assist this board, they should have a complete separate organization which shall be responsible to the subscribers of the new Company.

The Syndicate being vendors, cannot hope to be in absolute control of the Dunderland property, nor is it reasonable to expect

Capt. F. H. Pollen #3.

it. Then again, it will only be a very short time until we are ready to exploit our Cement rights and we must keep ourselves as free as possible to devote our time and energy to this branch, and then there will be other iron properties to handle and exploit.

The Crushing plant section at the Cement Works will be ready to make a test run in seven or eight weeks, in fact, the machinery is being erected in many parts of this plant and covered with tarpaulins on account of the Iron men being so late in delivering the structural iron for the buildings, which cannot be completed before December. This shortage in iron supply will cause a serious delay in the starting of the Cement Works.

Mr. Edison believes the most important thing to do now is to send a competent Hydraulic Engineer to examine the water power and estimate the cost of improving it so that at least 7,000 H.P. could be obtained for the first Mill; then later on more improvements might be made to increase the power, but it is going to be a very important question as to whether this first Mill shall be operated by steam or water power, as it would take at least a year after the order was placed to get our Allis Engines. He says the Hydraulic Engineer to send is Turcattini, of Geneva, Switzerland. He is the Engineer who designed the Niagara water power and Edison knows him very well and says he is not an expensive man. We also want in addition an appended report of the estimated cost for the complete utilization of the whole amount of power.



Capt. F. H. Pollen #4.

Mr. Edison also wants your authority to put one Draftsman on the working and laying out a rough general outline of the at Mine and sea. He has already made pencil sketches of what this should be. Then, after Layman had given him a contour survey of the land upon which the Mill would be erected, he will start the construction of a wooden model, always keeping up with the plans, and by the time the railroad was completed, everything would be well in hand for the erection of the Works.

Mr. Edison has gone into details with Windsor Richards, Arthur Keene and also with Mr. Ainsworth and a consort delegation who were here yesterday, and has amazed them by stating that based on his experience at Edison, he would be able to put this ore f.o.b. vessels for \$1.50. This has simply amazed these people and I can see that they are greatly interested. After Mr. Richards and Mr. Keene's return, I am going to take them in hand; go up to the New Jersey Zinc Works, to Edison, N.J. and over to Lebanon, Pa., where they are crushing 1,000 tons of iron ore with one of Mr. Edison's Crushers, and shall also spend a couple of days with them at Stewartsville. This will clinch the whole matter and in the meantime, we will rush the construction of that bank of magnets and put it in operation here and then have it boxed up and shipped to London, where we will make an exhibit if necessary, and further, should it

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Capt. F. H. Pollen #5.

be necessary, Mr. Edison and I will come over for one week.

The point I have tried to make in this letter, is for the present we have nothing to talk about and therefore, should have nothing to say until the time for action comes. Mr. Keene and Mr. Richards both say that Prof. Galloway is a coal man and any report from him concerning iron properties would be of no effect among iron men; that he is a very good coal expert and a very nice gentleman, but reporting on iron ores was foreign to his business, and if this is so, it would simply be a waste of money to send him to Norway.

Yours very truly,

*Coke*

April 18th, 1901.

Mr. Arthur H. Pollen,  
188 Fleet Street,  
London, England.

My dear Arthur:-

I have written a very important letter to the Syndicate to-day, which I wish you would see, as Mr. Lawrence must be in the heat of his campaign. I think you will agree with us here that it is the wisest thing to do for the present. This matter is a huge piece of work and it wants to be done right.

I enclose report of The General Electric Company which might interest your Father-in-law, as we had some talk regarding this while I was there. We have been entertaining all the big iron men here this week and I am leaving for home to-morrow.

Trusting that, <sup>Mr.</sup> Lawrence will be successful and with best wishes to you and yours, I am,

Sincerely yours,

*H. P. Rice*

(Enclosure)

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May 7th, 1901.

My dear Lawrence:-

I have just returned from Chicago and find your favor of the 13th ult., also copy of Sir David Dale's letter. I presume you have seen the letter written to the Syndicate, in which I gave the result of the visits of Windsor Richards, Arthur Keene, Ainsworth, etc. I do not believe that we are quite ready to go ahead with this matter, certainly not until we get the reports of Windsor Richards and have completed the bank of magnets which will be forwarded to London. I am expecting Mr. Keene and Mr. Richards here shortly, and when I see them, I shall pin them down to something definite.

Mr. Keene assured Mr. Edison and myself that there would be no difficulty whatever in finding this money under certain conditions and he impresses one with the fact that he understands fully all that he is talking about. Mr. Edison was greatly taken with Mr. Keene and Mr. Richards and believes that we should work with them as much as possible without alienating any of the other iron men we may desire to bring in, and believe it would be good policy to advise Sir David that when we are prepared to talk business, we would be glad to consider him, without letting him know that Keene and Richards are intensely interested, as we can see there is more or less jealousy between these two groups of Iron Masters.

Mr. Lawrence #2.

I am ready at any time to follow this matter up to a successful conclusion.

Wishing you success in your coming Election, and with best wishes to all, I am

Sincerely yours,

MR. Joseph Lawrence,

2 Whitehall Court,  
London, S.W.

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May 7th, 1901.

Capt. Pollen, Manager,  
Edison Ore Milling Syndicate,  
Amberley House, Norfolk Street, Strand,  
London, W. C.

Dear Sir:-

We have yours of April 23rd and are pleased to see that everything has been closed up properly. I just returned from Chicago yesterday and learn that the steel castings for the magnets are a little slow in arriving. We will have one here to-morrow and the balance will follow by express. It is rather a difficult matter to get these castings just right and there is only one concern that Mr. Edison was willing to employ and they are rushing this work.

I expect Windsor Richards and Mr. Keene on here very soon. We are glad to note that Dr. Lehmann is on the way; he will be instructed as to the operation of this bank of magnets and will in all probability take the apparatus back to London with him.

Rest assured that we will hurry matters forward as fast as possible.

Sincerely yours,

*J. B. ...*

May 10th, 1901.

Lord Kelvin,

The University,

Glasgow, Scotland.

My dear Lord Kelvin:-

I am in receipt of an invitation from J. D. Cormack, Secretary, to attend the International Engineers Congress early in September. I notice that you are connected with the Association, and if time permitted, I would be glad to accept, but I shall be busier than ever this year, therefore, shall be obliged to decline.

I trust that you are in good health and hoping to have the pleasure of seeing you on this side, I am

Sincerely yours,

Thomas A. Edison

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May 10th, 1901. .

The Edison Ore Milling Syndicate,

4 Amberley House, Norfolk Street, Strand,

London, W. C.


Dear Sirs:-

We are sending by United States Express 32 briquettes made from the Dunderland ore, 16 magnetite and 16 hematite. These are all right for phosphorus and you had better destroy the old briquettes you have.

Dr. Lehmann is here and hard at work.

Truly yours,





May 16th, 1901.

My dear Mr. Wallace;-

Mr. Dick handed me your book when he returned from London and I have neglected acknowledging its receipt. I have gone into it carefully and congratulate you on the good work you have done.

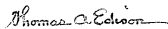
With best wishes, I am,

Sincerely yours,

Roger Wallace M.C.,

3 Hamlet Building,

The Temple, London.



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May 14th, 1901.

Capt. F. H. Pollen, Manager,  
Edison Ore Milling Syndicate,  
Amberley House, Norfolk Street, Strand,  
London, W.C.

Dear Sir:-

Please write Mr. Edison authorizing him to keep two  
Draftmen for the present on the preliminary plans for Dunderland.  
Dr. Lehmann will explain when he returns. He will also give you  
good reasons for what seems to be a delay in getting out the bank  
of magnets.

*Yours  
Hepcia*

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85 ✓

May 24th, 1901.

Capt. F. H. Pollen, Manager,  
Edison Ore Milling Syndicate, Ltd.,  
4 Amberley House, Norfolk Street, Strand,  
London, W. C.

Dear Sir:-

I enclose letter from Mr. Lockie, of Newcastle, and also a carbon copy of my reply.

Replying to Mr. Hall's letters of May 11th to Mr. Edison and myself, and also quoting paper read by Mr. Grearson, will call your attention to a few paragraphs on page six, which will stamp the Author among practical Iron and Steel men, as totally ignorant of the subject he endeavors to exploit. He states that Mr. Edison's briquettes are porous, which unfits them for use in the Blast Furnace. If they were not porous, they could not be used and it has cost Mr. Edison a great many thousand dollars to learn how to make them porous. Any iron master can give you the same reply. He also passes by lightly necessary machinery, etc. for crushing. If he knows where this can be procured, he can have some very strong firms give him a good retaining fee. It looks like an advertisement to me for Mr. Strong and his briquettes.

I enclose a report made Mr. Edison by the proprietors of the Blast Furnace where the briquettes were used, which defines this question.

Capt. F. H. P. #2.

The first magnet made from the steel casting, instead of the soft iron core, more than justifies Mr. Edison's expectation, having a "pull" from 25 to 30% greater than his previous magnets. This will allow him to use less magnets than he originally intended and the work will be pushed forward as rapidly as it is possible.

Dr. Lehmann will tell you of the talk we had concerning an Engineer to make the survey in Norway. We do not believe the best results can be obtained by using an English Railway Engineer, for the reason that road beds are built so expensively in England, they do not have the training that Engineers do in this Country. I went to the New York Central Railway to learn who built their road through the Adirondack Mountains, as this is about the character of work to be done in Norway. The President and one of the Directors, who is one of the Vanderbilts, sent out Mr. H. Roberts, who they said was the best Engineer for that class of work in America; that he had given them perfect satisfaction and could be depended upon in every way. Mr. Edison went into this matter very carefully with him and he offered to go and survey that road, remaining three months, for Five Hundred (\$500.) Dollars per month and expenses, and I consider it very cheap. As you are in ignorance of what was decided upon when Dr. Lehmann was here, I

Capt. F. H. P. #3.

cannot cable you until next Monday, when I will cable regarding this matter. Mr. Roberts is ready and willing to go at once and he will probably take his wife.

Windsor Richards and Arthur Keene will be here again Saturday and the first of the week.

Truly yours,

*He*

(Enclosure)

May 24th, 1901.

Messrs. Mac Rae & Sinclair,

St. Johns,

New Brunswick.

Dear Sirs:-

Replying to yours of April 30th, which has been referred to me by Mr. Edison, I beg to say that the situation as you describe it is very attractive. The new Edison battery will make the enterprise commercially profitable, as it will receive its charge in a short space of time and there is absolutely no deterioration. Mr. Edison is much interested in its projected enterprise, but it would be impossible for him to give any personal attention to the project and he could not become a shareholder for the reason that he never goes into any outside enterprise.

He will be pleased at any time to meet you here and talk the matter over with you, although it will be sometime late in the Autumn before any batteries can be delivered, on account of the necessity of completing the machinery for their manufacture.

Truly yours,

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May 24, 1901.

Sächsische Bankgesellschaft, Quellmalz & Co.,  
Dresden,  
Germany.

Dear Sirs:

Upon request of Mr. H. E. Reddlien, I answer his letter of the 11th of May and address you.

At the present time we are not ready to exploit the Foreign business. The works are being completed and the automatic and other machines are being constructed to manufacture the battery commercially. I can give you, however, the information you ask for. The new battery will weigh about 54 pounds per horse power-hour and the measurements will be 11 in. high and 80 square inches surface measurement per H. P. On account of it being able to be rapidly discharged as well as charged, almost any speed can be obtained.

We could not give any options on this battery.

Truly yours,

*H. E. Reddlien*

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May 24th, 1901.

Mr. E. Windsor Richards.

Dear Mr. Richards:-

I am in receipt of yours of yesterday from Philadelphia and I shall call on you at the Holland House, perhaps on Sunday<sup>night</sup>, so that we may talk over the best way to employ your time on Monday next. Mr. Edison and I both believe that you should spend that day at Stewartville, when you can see the Cement plant and the Crushing Machinery, which ~~machine~~, however, is not now running, but it will give you, I believe, a general knowledge of what the Crushing machinery is. As you only have one day at this time, we cannot go to see the New Jersey Zinc Company or over to Lebanon to see a small crushing plant there, but I am sure that the experience you get in Stewartville on Monday, will give you a more comprehensive idea of what Dunderland Plant will be than any other single plant you could see. Mr. Edison says he will go up with us.

With best wishes to you both, I am,  
Sincerely yours,

To Mr. E. Windsor Richards,  
Holland House,  
New York.



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May 29th, 1901.

Capt. F. H. Pollen, Manager,

Edison Ore Milling Syndicate, Ltd.,

Amberley House, Norfolk Street, Strand,

London, W. C.

Dear Sir:-

Mr. Edison and myself have had another interview to-day with Mr. H. Roberts, the Engineer I cabled about several days ago. It is very important that we secure this man, as he has exceptional qualifications for this work. We have a written proposition from him offering to furnish the necessary engineering tools and instruments to equip one full core for Five Hundred (\$500.) Dollars per month salary, and living and travelling expenses. This man is of a very high type and were it not for the fact that he never has been abroad and sees in this short engagement a possible opportunity to enlarge his field, we could not get him for ten times this salary. He is broad enough to see that he will come in contact with men of affairs, outside of his own particular field and is anxious to go. Mr. Edison and myself have looked him up and he is endorsed by the highest Railroad officials in this Country, as being the best man for this particular work. We cannot keep him in suspense, as he must soon know what he is to do, and I would ask you to send Edison a cable upon receipt of this letter, whether this arrangement is satisfactory to the Syndicate. He is in a position after a survey

F. R.P. #2.

is complete, to build the road on contract, or build it for you under your direction. You will find him most intelligent and up to date. Don't fail to cable us and we will send him along at once. He will bring his Wife with him.

Mr. Keene and Mr. Richards were at the Cement plant with me on Monday and yesterday I had Ainsworth and his group up there. To-morrow Ainsworth and his group come over here to spend the day to talk business. After I have heard what they all have to say, I will write you a full and complete letter so that you may be posted. It begins to look to me as though they were running after us now instead of our going to them.

Sincerely yours,

*W. B. Peck*

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May 31st, 1901.

J. Lawrence, Esq.,  
186 Fleet Street,  
London.

My dear Lawrence:-

Yours of the 16th of May at hand and Mr. Edison and myself again congratulate you on your victory. I see that there is something about the Dunderland property which you want to talk over with me privately and just as soon as the bank of magnets is complete, we will send it to London with the man in charge and I will come over to be there as soon as it is erected.

Mr. Ainsworth, Managing Director and Mr. Scott, Engineer of the Concerby Company, have gone into this matter most thoroughly and a report from either one of these gentlemen would be as well worded regarding our interests as though we wrote it ourselves. When they were over here a month ago, they saw the original magnet. Yesterday they again spent the day here and this time upon showing them the magnet and not telling them that it was the new magnet made from the special steel core which Mr. Edison devised, they at once saw the superior article of the present magnet over the previous one and asked what had been done to improve it. This shows the wisdom of going slow but sure on this bank of magnets and now everything is being rushed to complete it.

Mr. J. L. #2.

The pull of the new magnet is at least 30% more than the old one, which ~~was~~ <sup>fewer</sup> considered by everyone to be perfect. Consequently, we need ~~fewer~~ magnets in the Mill and they will be very much cheaper to construct.

Windsor Richards and Arthur Keene are coming <sup>over</sup> again. and Mr. Ainsworth says that he will bring the whole of his Board to London as soon as our bank of magnets is erected. In the meantime, Mr. Edison and myself both believe that our policy should be not to quote these gentlemen in any way, but to reserve all our ammunition until we are ready to fire the gun.

The Crushing plant, <sup>(Cansons)</sup> especially pleased Messrs. Ainsworth and Scott and they say they are convinced that the process in every way is a great success. Mr. Ainsworth is very familiar with the Dunderland deposits and I see he knows more about their value than perhaps anyone outside of ourselves. He tells me privately that Prof. Lewis and he have had many confidential talks regarding this deposit. I believe that the whole money required can be furnished and will be furnished by the Iron trade upon terms that will be equitable to the Syndicate. I have not gone into this matter in any way with these gentlemen, all that I have been showing

Mr. J. L. #3.

them was the mechanical and commercial side, the financial end has not been touched upon, although I have been urged by all of the gentlemen to give them an idea of what the Syndicate would do.

I am leaving for Chicago to-morrow to spend one week, but I shall return to spend several days with Windsor Richards and Keene before they sail on the 12th.

With best wishes, I am

Sincerely yours,

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June 10th, 1901.

Messrs. Morgan, Harjes &amp; Co.,

Paris,

France.

Gentlemen:-

Supplementing the letter that Messrs. J. P. Morgan & Company wrote you referring to the Edison Storage Battery, which was written during my absence from the Laboratory, I beg to say that it will be some considerable time before the battery will be exploited abroad. The first factory is now being equipped with automatic and special machinery for manufacturing this new battery, and it will probably be at least four months before batteries in any quantity are turned out commercially, and it is our intention not to do anything abroad until we can demonstrate by actual commercial results just what these batteries can be produced for. It may be the beginning of next year before we will seek to exploit the battery in Foreign Countries.

The writer has had for several years a letter of introduction to your firm from Mr. Edison, but has not presented it. I will be pleased to at least show you what this battery is before any definite arrangements are concluded for France.

Very truly yours,

*H. E. Jones*

✓  
June 17th, 1901.

Joseph B. Baucus, Esq.,  
8 Warwick Court,  
High Holborn,  
London, W.C.

Dear Sir:-

Your extraordinary letter of the 8th of June received this morning. When and where did you get authority from Mr. Edison or myself to open negotiations with anyone for the Storage Battery? When I saw you last in London, you asked me if there was any truth in the rumor that Mr. Edison was working on a storage battery, and I said there was, but I had said nothing about it, as it was yet incomplete. You asked me if there was any way you could help us in the matter when the proper time arrived, and spoke particularly of the Coates people, saying that through you they had invested considerable money in the New Jersey business at Ogden, and asked that they might be allowed to come in in some way should a Company be formed in England for the manufacture of the new storage battery, if the battery should prove successful, and I said that I would report your wishes to Mr. Edison, which I did. Mr. Edison has his own views on what he wants done with the battery in proper time, and you are taking a most peculiar course to convince him that you could be of use to him.

Mr. Edison has been annoyed enough by Col. Gouraud in

J. D. P. #2.

Letters of this kind without additional worry.

We are receiving hundreds of letters, cables, etc. and to each inquiry, we say that we are not ready to offer the battery to anyone.

My advice to you, in order that you may not lose your good standing with the people with whom you have talked, is to put the matter before them just as it stands.

Yours very truly,



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June 21st, 1901.

Capt. F. H. Pollen, Manager,

Edison Ore Milling Syndicate, Ltd.,

4, 5, 6 Amberley House, Norfolk Street, Strand,

London, W. C.

Dear Sir:-

Since your letter of the 3rd inst. was received, Mr. Anderson has been here and Mr. Edison gave him a letter to Mr. Darling, Constructing Engineer at Stewartville, to let him see anything he desired, and I presume he is now there.

He informs us that the Cement Combine of England, of which his Father is Vice Chairman, has made rather a muddle of introducing Rotary Kilns. On account of the primitive way in which they grind cement, they have met with great difficulty in grinding the product of the rotary kiln. He says that they are obliged to underburn, for if they burn it in a proper manner, it becomes so hard that their grinding machinery will not grind it, for all other appliances for pulverizing cement grind, except ours and ours crush. The harder and more brittle a product is for our system, the better results we obtain.

We note that you are still uneasy and perhaps suspicious regarding the Edison briquettes. We infer this is because a nobody got up and made a mis-statement which only puts him in a ridiculous position before the Iron Trade, who are the real judges in this

P.H. P. #2.

matter. You can without difficulty procure from Mr. Ainsworth, Mr. Richards or Mr. Keen a statement which will be of value to you as against the sputterings of an unknown. We do not want to furnish you the complete Stanhope reports. In the first place, we are not supposed to have any report. A copy was sent us to read made by the Engineer in charge to the owner of the Furnace and we had a duplicate made from it and there are many things in this report which go outside of the stability of briquettes, and portions of the report are unfavorable, not on account of using briquettes, but on account of the Furnace being an old type Furnace and lacking in blowing capacity, etc., etc., and this report were it to leave our hands would reflect upon persons entirely outside of those interested with ourselves and could do no good; would undoubtedly lead to much trouble and put us in a discreditable position with our friends.

We have written to the Allentown Furnace, who use more briquettes than any other Furnace, to make us a report regarding their use, and as this is a modern Furnace, well equipped, it will be most satisfactory and we shall forward on its receipt; but we do not advise you to make public these matters at the present time, as the people you must rely on are men from your side and have been over here investigating on your account, and not bring any people

F.H. P. #3.

outside, at least not for the present.

As previously advised you, Mr. Edison will sell a roll exactly like the one in use at Lebanon, for \$3,000. here. There will be some additional charge for putting on the plates, as at present we do not know the size they wish to crush to; but if they will correspond with the Lebanon people, who fitted their own roll to accommodate their own particular ore, I am sure that they would be pleased to advise them as to what it cost them to put on the necessary plates. It will not be a large expense and can be done by the Morris County Machine & Iron Company, but the buyers will have to bear this additional expense.

By January first, it is expected the Cement plant will be in operation; then in addition to the New Jersey Zinc Company can be shown a crushing plant capable of treating any kind of ore and will be the model crushing plant of the World. This you will then have to refer to and can be personally visited and inspected by the Mining men on your side. I hope that Sir Hiram S. Maxim and as many other eminent men who can will go into this sort of business, then the World will appreciate what Mr. Edison has accomplished; but not until then. This is a business that does not require a temporary spur or newspaper boom to carry through. If the Company should now fail with the support that will be given it by Windsor Richards,

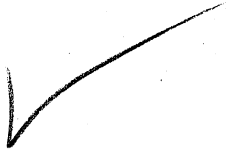
P.H. P. #4.

Arthur Keen and Mr. Ainsworth, it would show that all this cry about the British Iron interests needing additional supplies of ore, was a farce. Mr. Edison and myself have been personally assured by two different groups that the money would be promptly forthcoming and I do not believe it will be necessary to rush into public print to find this money.

We note Patterson and Stead's analysis of ore briquettes and cement rock. The phosphorus in the Hematite is a little disappointing, but when one understands the primitive experimental methods we have used here, it is not to be wondered at, besides taking the low phosphorus in a low magnetite, the two ores combined are away below the limit in phosphorus.

Mr. Edison was very much interested in the assay of cement rock and he has had his Chemist work out three mixtures, any one of which will produce a high grade of cement, and we herewith enclose table of said mixtures.

All the castings have been received for the magnets and they are well underway, most of the magnets being completed. Mr. Edison was obliged to change the design of this bank of magnets on account of showing the separation of the magnetite which Mr. Keen insisted upon showing, so as to make the process complete. It will take some little time to erect this construction in London,



P.H. P. #6.

and Mr. Ballantine will go over and attend to this part of the work. It promises to be rather a huge affair and will weigh perhaps fourteen tons, but it will be complete.

I am leaving in a few days to take a little rest up in the Country, but all your matters will have prompt attention.

Truly yours,

✓  
July 2, 1901  
August Belmont & Co  
New York City.  
Gentlemen:

Referring to my  
last over the telephone with  
you Mr. Davidson I ask that  
you kindly write me advising  
to 104 Lake St. Chicago saying in  
substance what Mr. Davidson  
said over the phone—that you  
did not care to take any  
of the Edison Storage Battery  
Bonds and greatly oblige

Truly Yours  
W. C. Field

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October 7, 1901.

Arthur Keen, Esq.,

c/o London City &amp; Midland Bank,

Leadenhall Street,

London, E.C.

My dear Mr. Keen:-

I am here in Orange, but Mr. Edison thinks it best for me to remain a week or two, so as, if possible, to give me the complete data of the cost of railroad, etc. etc. We are expecting to hear by every mail from our Engineers and from Dr. Lehmann. He does not believe that I will lose any time, as it will be several weeks before the magnets can be erected in London. You may run across Mr. Lawrence in the meantime, and as you know, as has been here recently.

I cannot say just what day I will sail at present, but it will be very soon. I mentioned to Mr. Edison that I was about to write you and he asked that he be kindly remembered to you.

With best wishes, I am,

Sincerely yours,

J. E. Dick

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October 28th, 1901

W. Conner, Esq.,

Macquinn,

Michigan.

Friend Conner:-

I arrived last evening and with your letter in my pocket as a reminder, I looked up the piece of copper ore you gave me before leaving the Lodge, and found that it had not been assayed. Mr. Edison examined it and said there was both copper and nickel in it and it appeared to be rich. He said if he had a little more of the ore, he could go into a thorough assay and also work out a system of treating the ore, provided there was enough of it to pay him for going to this expense.

Now, what I want you to do, is to write Mr. Edison just how much of a body of this ore you have seen; its width and whether you have a claim on this property, and if not, how it could be acquired, and so fast, all the particulars you can give him and if this satisfies him, he will go ahead and work out the problem, which will take some few weeks.

In writing a statement to Mr. Edison, be sure you state exactly what you know to be a fact yourself and not hearsay and with your experience that you have had in that Country, you ought to be able to give Mr. Edison an intelligent outline of the whole proposition.



B.C. #2.

I am sailing on Thursday and will be back by Christmas.  
If there is anything in this proposition, you had better keep it  
to yourself until we can advise you just what is best to do.

With best wishes to you and Mrs. Copps, I am,

Sincerely yours,

W. P. Reid

Oct 29 1901

My Dear George

This will introduce Mr. Herman C. Dick  
 who is interested with me in connection  
 with my new Storage Battery in  
 Europe. He will explain about the  
battery

Yours

The Edison

Jan. 3, 1902.

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Steve Albright, Esq.,  
Room 28, Hotel Cecil,  
London, W.C., England.

My dear Steve:-

I have yours of the 14th and also one of later date, and instructed the office in Chicago to pay your draft before I came on here last Tuesday.

I have not been feeling so very well for a few days in Chicago, but was obliged to come down here to meet some English Engineers who are returning Saturday. At present, my plans are to sail on the St. Louis on January 15th.

Referring to Mr. Hawley, Mr. Edison says that he met him once only, but not at his Country home, and that he believes he had something to do with the franchise of the Erie <sup>Western</sup> Railway, in connection with Senator Platt, but that he knows nothing whatever about him and he has always understood that he was a promoter, pure and simple. I learn from other sources, that he stands very well with Senator Platt, but I can get no further information regarding the other gentleman you mention.

Zach Hofheimer seems anxious to hear from you and I told him that my impression was you had written him, but he said he never received a letter from you. He don't know what to do about your office and I believe it would be only fair to him if you

S.A. #2.

would write him. I explained to him that at my suggestion you remained over there until my return and then you might know definitely what your plans would be.

Yours very truly,

*H. E. Quinn*

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Jan. 3, 1902.

Edison Ore Milling Syndicate, Ltd.,  
Amberley House, Norfolk St., Strand,  
London, W.C., England.

Dear Sirs:-

I enclose you the original letter from the Crane Iron Works, as requested in yours of December 14th, also a copy of Mr. Edison's letter requesting a report on the briquettes. Please return this letter when you have finished with it.

Mr. Edison answered your cable requesting Lehmann to return, saying that he could not spare him quite yet, but in a few days he hopes that Lehmann will have finished his experiments here, so that he can return and see that the magnets in London perform their work properly.

I enclose herewith copy of Draft Prospectus with certain changes suggested by Mr. Edison.

The Engineers are returning on Saturday on the "Kronprinz" and I believe they are perfectly satisfied with what they have seen here. They are bringing with them certain reports and estimates in detail, and as we did not have time to prepare duplicate copies, we will forward to you by next Steamer, copies of what we have furnished them and also copy of their letter to us requesting certain specific information.

E.O.M. S. #2.

I left Chicago on Monday and have spent this week with them, but am hardly well enough to leave on Saturday, the 4th., besides, on account of my illness in Chicago, I left undone a lot of work which I must finish before I return. From the 4th inst. until the 15th, there is not a Steamer sailing, excepting some small slow ships that I would not risk the crossing upon; so that it will be almost impossible for me to leave here before the 15th. on the St. Louis. This season of the year all the large Steamers are taken off for a month or two and I do not care to risk the discomforts of a small Steamer at this time of the year.

I am sure that we will have the phosphorus problem solved perfectly satisfactory and I know that it will create a great deal of additional interest in this enterprise when the last samples sent by Mr. Edison have been assayed and found to contain practically no phosphorus whatever. Mr. Edison says, to be on the safe side, he can estimate the cost of this additional treatment for the elimination of the phosphorus at about ten pence per ton, instead of four to five, although the actual cost will perhaps be less.

Yours very truly,

*H. C. Rich*

(Enclosure)

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6/11/02/HEB/L

Captain F. H. Pollen, Manager,  
Edison Ore Milling Syndicate, Ltd.,  
London, England.

Dear Sir:-

Mr. Edison has referred yours of the 30th of May, regarding gold crushing, to me for reply, having made the necessary notes, which I enclose.

Mr. Edison lays great stress on the fact that with his system of crushing, there are so few fines, which is the terror of all gold mining Companies in Africa. It makes limes which are hard to treat and is a great objection in every way.

I am pleased to note the progress on the railway and I am very glad to hear that Mr. William Rhoads has been elected a Director of the Three Companies.

Mr. Edison says it will hardly be necessary to send ten tons of ore; that he can experiment equally as well with one ton and he would be most pleased to receive it, and promises to give it prompt attention.

I enclose a letter received from Mr. C. E. Hall, No. 58 Foster's Buildings, High Street, Sheffield. He has been informed that same has been referred to you.

Yours very truly,

(2 Enclosures)

6/11/02/HWD/L

W.D. Heyne, Esq., Chairman,  
Liverpool Warehousing Co., Ltd.,  
28 Exchange St., East,  
Liverpool, England.

Dear Sir:-

Your favor of the 30th of May to Mr. Edison, has been referred to me, as I attend to all Foreign business.

It is my intention to organize an English Company for the manufacture of the Storage Battery, just as soon as we can determine here by actual results, all expenses incidental to its manufacture.

I have just returned from London, having brought out the Dunderland Iron Ore Company, and it is probable that an English corporation will be able to deliver Edison Storage Batteries, in say, one year from this date. All the problems are solved and it is only a question of the time it will take to complete the special machinery necessary for their manufacture.

I have filed your letter and will advise you, as requested.

Yours very truly,



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5/11/02/HED/L

Edison Ore Milling Syndicate, Ltd.,  
Amberley House, Norfolk St., Strand,  
London, W.C., England.

Dear Sir:-

I cabled you yesterday not to return the magnets. Mr. Edison believes that it would entail a large amount of expense and it would be well for you to keep the magnets for other purposes.

After a conference with Mr. Edison, Ballantine and Simpkin, it was determined that on account of the great expense of the magnets for Dunderland, and in fact, the magnets being the crucial part of the whole operation, it was thought best to erect here, one unit of just what would go to Dunderland, have everything thoroughly tested and cheapened as much as possible, without interfering with their efficiency, and when finished here, it could be used as a pattern.

Mr. Simpkin is getting along very well and everything is progressing most smoothly and satisfactorily.

After dictating the above re magnets, it occurs to me that it is not a matter for the Syndicate. I wish you would have this brought before the Dunderland Board, if you consider it necessary, as it is a matter, of course, for the Dunderland Company to pay for. It will be about four weeks before the complete

E. O/M. S. #2

briquette oven is finished; but I have great hopes and a firm belief that it will be a splendid success. Simpin is very much taken with it and Ballantine also. From results already obtained, it does not seem possible for anything to come in the way of its success. The entire expense of bricking would be one shilling and the saving in the erection of the briquetting plant would be more than \$175,000.

Simpin will bring over everything necessary to complete the design in London, and in fact, part of the plans he has in such condition at present, that he could invite tenders for them.

I expect to be here for sometime yet and then I shall go up to my Country place, where I hope to remain undisturbed until September first, at least.

With kindest wishes to you all, I am,

Sincerely yours,

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June 16, 1902.

S. Bergman, Esq.,  
23 Oudenarder Strasse,  
Berlin, Germany.

My Dear Bergman:

I today cabled you to pay W. N. Stewart, who will call on you and with whom you are acquainted, a thousand marks. This is all you need to know. Pay him the money and I will forward it to you. Let him talk all he wants to, but you can truthfully say that you know nothing except that you had a cable from me to pay him the money.

Everything is going splendidly here. With kindest wishes,

I am,

Sincerely yours,

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June 16, 1902.

Dr. Giorgio Finzi,  
c/o Birosci Finzi,  
Milano, Italy.

Dear Mr. Finzi:

I have yours of the 26th of May and beg to say that I arrived here about a month ago and after spending a few weeks with my family, am in Orange again and will be for a short time.

Before this letter reaches you you will have undoubtedly heard of the first test Mr. Edison made of the battery. Within a week five automobiles will be on the road and each will have to cover a distance of 3000 miles over all kinds of roads and under all conditions.

If these tests are satisfactory to Mr. Edison, the battery will be offered for sale in little quantities, the output being increased from time to time, as additional machinery is completed until the full capacity of the present factory is reached, which is about 400 cells.

I expect to go abroad the first of November to exhibit the battery but in the mean time I shall write you and if you deem it advisable I think I could get Mr. Edison to send over one cell for you to test before I arrive.

With best wishes, I am,

Sincerely yours,

✓ June 18, 1902.

Countesse Ludmilla Bobrinsky,

153, Rue de la Pompe,

Paris, France.

My Dear Countess Bobrinsky:-

As the foreign end of the storage battery business is in my hands, Mr. Edison has turned over to me your favor of the 29th of May, and in reply I would say that the American Company expect to be turning out a limited number of batteries in about two months, increasing the out put from time to time as fast as additional special machinery can be made.

I expect to organize a French Corporation in the early winter for the manufacture and sale of the new Edison storage battery. This battery is all you say it is and especially adopted for vehicle traction.

Your letter has been filed and you will be kept fully posted. Thanking you for the inquiry, I am,

Sincerely yours,

June 18, 1902.

G. H. Pollison, Esq.,  
Elm Grove,  
Windermere, England.

Dear Sir:

As the foreign end of the storage battery business is in my hands, Mr. Edison has turned over to me your favor of the 30th of May. The American company will begin furnishing a limited number of batteries in about two months and it is probable that an English corporation will be organized for the manufacture and sale of the new Edison storage battery the first of next year. It would take about six months to put up a new plant with the special machinery and so it will be atleast something over a year before this battery can be offered for sale in England.

Yours very truly,

6/20/HRD/L /02.

Sir David Dale, Bart.,  
West Lodge, Co. Durham,  
England.

My dear Sir David:--

I have always talked very frankly with Mr. Ainsworth about Mr. Edison's interests and my own, in connection with the Dunderland enterprise, and I have to-day written Mr. Ainsworth that I am writing you this letter.

In order that you may fully understand the situation, I must go back to the time when Mr. Lawrence employed Mr. Simpkin.

At my urgent request by cable, Mr. Edison allowed Mr. Simpkin to go over to London and meet the gentlemen who were considering investing in the Dunderland enterprise. He could not well afford to spare him at that particular time, but sacrificed his personal interest to accommodate me.

Before leaving London, after having practically finished his work, he was employed by Mr. Lawrence at a salary largely in excess of what he was receiving here and more than he would have been willing to come for in the beginning of the work, at least. The agreement was made with him, unknown to me, and you will remember that the first time I heard of it, was at a meeting at the Linotype Company, where you, Mr. Ainsworth, Mr. Wallace and myself were present. You may remember how indignant I was when Mr. Lawrence

#2.

mado the statement that he had employed Mr. Simpink for \$2,000.  
per year.

When Mr. Simpink returned to this side, Mr. Edison was  
down in Florida at his Winter home, where he generally goes for  
four or five weeks and when he came back here, he found Simpink in  
full charge, occupying a portion of the Laboratory.

Mr. Edison would have been willing to have turned over Mr.  
Simpkin had he been approached in a proper business like way, but  
he was not consulted and the employing of one of his best men  
without referring in any way to him, was, to say the least, most  
unbusinesslike.

Mr. Edison has never received a letter requesting that  
he design the Dunderland plant, nor has he been informed that  
Simpkin is to be the Constructing Engineer, working under his  
direction. While there are three corporations, the Syndicate,  
the Construction Company and the Dunderland Company associated in  
the Dunderland undertaking, so far as the Dunderland proposition is  
concerned, the Board of the Dunderland Company must be supreme;  
therefore, it does not matter whether Mr. Simpink was hired by the  
Syndicate or by the Construction Company, a letter must be sent to  
Mr. Edison, advising him that he is to design the Dunderland plant,  
and that Mr. Simpink is to be the Constructing Engineer.



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Mr. Simpkin is a first class man and the best possible man that could be employed for this purpose, but in London, he only came in contact with the Chairman of the Syndicate, and came home full of instructions from him. All the information Mr. Edison gets re Dunderland, he receives from Mr. Lawrence and from this end, it would seem as though he was in supreme command; and we all know how unfitted he is to direct a huge enterprise of this character.

Much work has already been done toward the designing of this plant and Mr. Edison has been very busy in this connection, so that no time has really been lost; but now, it is most important that Mr. Edison receive the letters above referred to.

Mr. Simpkin expects to leave here on the 5th of July, with the general plans complete, the details which will be worked out in London by Simpkin and his staff, and a blue-print of each drawing must be sent to Mr. Edison for his approval.

Mr. Edison has the utmost confidence in Mr. Ainsworth and his associates, and only desires the plant shall be a great success. It is for this reason that he must approve all plans and machinery to be used at the Dunderland plant.

You will remember, in our conference regarding the amount to be paid to Dr. Lehmann and Mr. Roberts, we all saw the effect

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of paying Mr. Simpkin the salary we do.

I write you thus frankly and personally, because you are a member of the Syndicate, and in addition, hold shares in the Construction Company, and are Chairman of the Dunderland Company. Will you please have the above letters written as early as you conveniently can, and greatly oblige,

Very truly yours,

June 24, 1902.

Vernon H. Brown, Esq.,  
29 Broadway,  
New York.

Dear Sir:

As the foreign end of the storage battery business is in my hands, your favor of the 18th inst. enclosing letter from Mr. D. Cunningham has been referred to me by Mr. Edison, and in reply I beg that Mr. Cunningham's letter has been acknowledged and shall have attention when the time comes to form an English company.

Yours truly,

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June 24, 1902.

Messrs. Quellmaltz & Co.,  
Sachsische Bankgesellschaft,  
Prager Strasse 20, I.,  
Dresden, Germany.

Dear Sirs:

Replying to your favor of the 5th inst. addressed to Mr. Edison, which has been referred to me, beg to state that a foreign corporation will probably be organized during the coming year in Germany for the manufacture and sale of the Edison Storage Battery; just how this will be done I am not in a position to say at present.

Your letter has been placed on file.

Yours truly,



June 24, 1902.

D. C. M. Hume, Esq.,  
Seafarth, Bournemouth,  
Hampshire, England.

Dear Sir:

As the foreign end of the storage battery business is in my hands, Mr. Edison has turned over to me your favor of recent date, and in reply beg to say that it will be atleast a year or longer before a factory is established in England for the manufacture of the Edison Storage Battery. These batteries can be used to furnish power for any vehicle.

Yours truly,



750

Oct. 8, 1902.

Messrs. Frazer & Co.,  
65 Wall St.,  
New York.

Dear Sirs:

As the foreign end of the storage battery business has been turned over to me your letter of the 7th inst. addressed to Mr. Edison has been turned over to me for attention and in reply I beg to state that at present we are not yet ready to exploit the battery in foreign countries. We expect to organize a corporation in Japan as well as in other foreign countries during the coming year for the sale and manufacture of the Edison battery but just how this will be done I am not in a position to say at present.

Your letter has been placed on file.

Yours truly,

*W. E. Dick*  
J.

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11/17/02/HRD/L

S. Rosenberg, Wm.,  
25 Unter den Eichen Strasse,  
Berlin, Germany.

My dear Bergmann:-

I cabled you on Saturday, as follows:

"Give long charge at thirty amperes for twenty-four hours to bring it back from heavy discharges you gave it, then discharge down to three quarters Volt at thirty ampere rate. Thereafter charge and discharge at thirty ampere rate; this gives best results."

The cell has been charged and discharged at too high a rate. Your electrician probably was aware of this before you reached my camp.

If he has any doubts regarding the charging rate, have him charge and discharge the <sup>proper</sup> cell at 50 amperes.

I enclose a curve made from one of the cells you have before you send it, and you will notice the charging and discharge curve is about the same. You will also note that the scale is not in squares the same as yours, which at a glance looks to be better than it really is.

I arrived on Thursday afternoon, after a very tempestuous crossing but in good health and I did not miss a meal, although I never, in all my experience, have seen the Dining Saloon with less people in it. Only the old veterans took their places three times a day.

S. B. #2.

Of course, to discharge at 50 ampere rate, would require more plates than in the cell you have.

Everything generally is much better than when you were here. The efficiency of the battery keeps creeping up and we have now begun to assemble cells at the factory, and next month will equip one wagon each for all the leading Dry Goods concerns in New York City for their delivery wagons.

Mr. Mallory says that all the machines, etc. ordered for Berlin, will be completed about February first. I am going this afternoon with Mr. Edison down to the Chemical Works. I will write you the latter part of this week after I return from Stewartville. I shall come back here shortly after Thanksgiving and put in my time steadily until Christmas.

With kindest wishes to all, I am,

Sincerely yours,

*A. E. Dick*

(Enclosure)

11/13/02/AM/L

T. N. Hardy, Esq.,

P.O. Newydd,

Treddefant, N. Wales.

Dear Sir:-

Yours of October 28th, has been held pending my return from Germany.

I fear I cannot promise you an Accumulator such as you desire for lighting. However, I wish to say that the accumulator is all right and is better than the claims put forward for it by Mr. Edison.

In this Country, we are just beginning to equip automobiles, having completed all the tests Mr. Edison deemed necessary. The present factory is only a small one and was equipped for the purpose of getting the business well in hand before beginning work on a large plant. It will have a capacity only of about 300 cells per day, and as orders could be had for many times this number, you will see how improbable it is to promise anything for a long time.

I expect to be in England, in perhaps sixty days, with a few batteries. Fortunately, they speak for themselves and their performance will convince the most skeptical unbeliever.

Thanking you for your inquiries, I am,

Sincerely yours,

*H. P. R.*



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11/21/02/HND/L

W. J. Ore Milling Syndicate, Ltd.,  
Atherley House, Norfolk St., Strand,  
London, England.

Dear Sir:--

I enclose a statement handed me by Mr. Edson, showing the expense of briquettes up to the present time. There will be very little more expenses connected with this, but Mr. Edson does not want to exceed the amount you have already allowed. It is most important that an additional allowance should be made him and I am writing you because it is not quite clear in my mind whether it is the Syndicate or the Dunderland Company who should be addressed, although I understand the Dunderland Company is bearing the cost.

Mr. Kalliday, Secretary of the Consett Iron Works has been here and looked over the briquetting ovens, also the bank of magnetite ore. He also spent a few days at Stewartville.

Mr. Edson, since I left England, has made a most important discovery regarding the manufacture of Portland Cement. It is more important in the Cement world than the Bessemer process was in the Steel world.

R.O.H.S. 24.

He is able to make Cement absolutely uniform, always the same kind or such strength as has been heretofore unknown. He is taking out Process Patents and I have had a complete understanding with him regarding what he thinks is fair for him in turning over these patents to the Syndicate; and I am sure that when I come over and state these conditions, you will see they are most fair to the Syndicate and fair to him.

It is not necessary now to find Cement rock; what you want to look for is almost any kind of shale or slate. You will always find a limestone (Carbonate of lime) adjoining. This deposit, of which there will be no difficulty in finding, must be first well located; that is, it must be adjacent to water, for as Mr. Edison says, there is no incentive for him to save a penny a ton here and a penny a ton there, if all these savings are to be swallowed up in freight, royalties, etc. There is such a huge field of this state deposit and limestone that you can practically make your own selection, but bear in mind that the most important is all in location. It must be where a Dock can be built for unloading ships, without any railroad haul, and it must be freehold property. You will appreciate the importance of this when I tell you that the plants such as the one at Stewartville will

P.O.M. 2. 78.

make all the Portland Cement there is made to-day in England and  
dock, plant and all the appurtenances necessary to put these two  
plants in a going concern, together with the <sup>purchase</sup> question of the  
deposit. It would cost less than one million sterling.

When you get these samples from the different deposits,  
number with #1 and number them consecutively, sending Mr. Edison  
about a pound of each sample and he will have them assayed at the  
Cement Laboratory at Stewartville, charging you actual cost for  
the time. This will save a large sum of money for assaying  
and it will also give Mr. Edison a chance to determine the character  
of the deposit. A complete record of these samples must be  
kept, as you know. With our machinery we can handle slate  
and no one else can, and under the process of this new discovery,  
we want slate and limestone only.

Also look out for dock and port charges in the different  
localities, for we are going to start in and do the Cement business  
of the World and we do not want to be handicapped on the outgo by  
any of these petty charges that eat into our profits. We have a  
great margin but we want to keep that margin ourselves instead of  
paying it out unnecessarily.

We want to get at this just as soon as we possibly can  
and above all things, do not mention that we want to make cement

E.O.S. No.

out of slate or we will bid up the Slate properties against ourselves. Just go ahead quietly; find your properties and when Mr. Edison is satisfied with the deposit, secure an option on it for outright sale and then we will ship over 500 tons of the slate, make cement of it and ship it back, and then nobody can be deceived in the matter.

It is amazing how the Cement business has reached the proportions it has with such little knowledge in the trade as to how cement should be made. I believe that the Syndicate can and will control the Cement market of Europe and the profit in its manufacture will be something gigantic.

These statements I make after cement has been made at Stewartville. On account of this new discovery of Mr. Edison's, certain conveyors, etc. have had to be changed, but the Mill starts up in a very few days.

Very truly yours,

(Enclosure)

11/21/02/HKD/L

The Mulliner-Wigley Company, Limited,  
Coventry,  
England.

Dear Sir:-

Yours of October 30th, has been held pending my arrival from the other side.

It is our intention to establish a factory in England at an early date, for the manufacture and sale of the new Storage Battery, and until that has been done, it will be impossible to offer any batteries for export. Commencing about the middle of next month, a limited number of batteries will be delivered and the capacity increased until the fullest possible output is attained, as the endurance test conducted by Mr. Edison for the past four months, has been most satisfactory.

The batteries are sold for Fifty dollars per horse power hour, which is the prevailing price of the lead battery on this side.

There is no up-keep, as there is no depreciation in the battery and nothing ever has to be added excepting water and a battery should be in as good condition and as efficient at the end of ten years, as it is after three months use.

I have filed your letter for reference.

Trusting this gives you the information desired, I am,

Very truly yours,

*H. D. Wick*

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11/21/02/HWD/L

George Ainsworth, Esq.,

Consett Hall,

Consett, C.D., ENGLAND.

My dear Ainsworth:--

Mr. Edison has handed me your letter of October 30th, and asked me to say that gas as a fuel will not be suitable for the burning of the briquettes. He has achieved such splendid results at the Cement Works with powdered coal as fuel, and has been able to so control the heat both in the Cement Roaster and in the briquette ovens that he is of the opinion that it is the fuel to be used. Not much has been done or can be done until he has received the Dunderland ore.

The bank of magnets 64" high is very nearly ready to be tested. In his briquetting experiment he is using, say, one briquette of Dunderland ore and 20 briquettes of Edison ore, as he is so short of the Dunderland ore.

I have not yet handed him your photograph but I told him I had it. It is in my trunk which I have not yet unpacked as I have been expecting to leave for home every day.

Mr. Holliday has been to the Laboratory and up to the Cement Works, and after going over the Cement Works, has given us his seal of approval. He has asked Mr. Edison for a photograph, and I will get him a small one. When he arrived at the

G. A. #2.

Laboratory on Wednesday, I was with Mr. Edison over to the Battery Works, and he had spoken to Mr. Mallory, asking if he could get a phonograph. Mr. Mallory asked me to see if I could get Mr. Edison to give him one. So far, I have not made the request, as Mr. Edison has more than 30,000 phonographs behind orders. Mr. Edison has put you on a list with instructions to have all desirable new records forwarded to you.

I expect to leave sometime in January but may take the Southern route and leave my family in Italy before coming to London. There are a great many matters I want to talk over with you when I see you, regarding Mr. Holliday's visit here.

The Shipping Clerk at the Laboratory informs me that you must have received those large photographs of Mr. Edison by this time, as he has received word from the Express Company that they could not go astray, as they were in such a large box and the markings were correct. Upon receipt of this, if they have not yet turned up, I wish you would cable as follows: "Dick--Chicago; No;" and I will understand.

With best wishes, I am,

Sincerely yours,

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12/1/02/HED/L

Mr. S. H. Pollen, Secretary,  
Fitzalan House, Arundel St., Strand,  
London, W.C., England.

My dear Sir:--

Mr. Edison has handed me yours of the 19th of November.

We were under the impression that this was a briquetting experiment and that the Board were convinced the Hematite could be separated and the phosphorus practically eliminated.

Mr. Edison has been using any Dunderland Hematite that he can find here and does not know whether it is 50% or 60% or whether it is high or low in phosphorus. What he is trying to do, is to produce a briquette from the Hematite only. As soon as the Dunderland ore is received, the bank of magnets will be ready for it and then we will be able to send you briquettes for analysis, but not until then.

We have no way here at present of separating but shall have the high bank of magnets ready to test this week; unfortunately we cannot go any further until we receive the ore.

Very truly yours,

*W. H. Pollen*



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12/11/02/HRD/L

H. F. Parshall, Esq.,  
Salisbury House, London Wall,  
London, E. C., England.

Dear Mr. Parshall:--

I have yours of the 25th of November and note what you say.

The great difficulty I am going to have, is, not to find money for the establishment of a manufacturing plant, but to use my very best judgment in selecting the persons who are to form this Company, outside of Mr. Edison and myself.

I have been here for some few weeks and have gone into this Battery business very thoroughly. Mr. Edison expects to commence delivering a limited amount of batteries next month and this output will be increased gradually up to full capacity of this first small factory.

The battery is all right. I have one weighing 345 pounds in my automobile, which theoretically, ought to take my runabout about one hundred miles over these Country roads. Practically, I never have gone over eighty-eight miles with it, but there seemed to be plenty of ginger left in it after travelling this distance.

I believe I can arrange to send you one cell shortly after January first and I would like to have you see for yourself what there is in it. It has always been my intention to invite

H.M.P. #2.

you to become the Consulting Engineer of the proposed new Company, and for this reason, I would like to have you satisfy yourself so far as it is possible to do, just what this battery is.

I am expecting to leave for Italy about February first, where I shall locate my family and come up to London on other business, as I do not expect to organize an English Company for several months yet. I want to be in a position so I can show just what this battery is. The cost of manufacture and all the thousand and one little details, which will take at least two months yet to procure.

With best wishes, I am,

Sincerely yours,

*J. E. Pin*

P.S. Please do not mention that you expect one of these calls.

144 ✓  
285  
12/11/02/HED/L  
W. N. Stewart, Esq.,

c/o A. B. Giffins & Co.,  
58 Victoria Street, Westminster,  
London, S.W., England.

Dear Sir --

I have yours of the 20th of November and note what you say regarding your people in Sweden.

I asked Mr. Edison yesterday about your question regarding the maximum safe discharge rate of any given size cell and this is what he wrote:

"With our best auto of 36 cells, normal discharge rate 25 to 30 amperes, average 1.2 volts per cell, maximum rate, the vehicle takes on climbing the Eagle Rock hill, 105 amperes. The new cells will have a charging capacity of not less than 200 watts per cell. 18 pounds ~~say~~ <sup>that</sup> say, one year of daily service."

I do not know that this quite answers your question, but it is safe to say that the cell can be discharged at eight to ten times its normal rate without injury.

I expect to leave here about February first for Italy and will go from there to London. With best wishes for your success, I am,

Truly yours,

*H. E. D.*

290 ✓

12/11/02/HMD/L

Mr. S. H. Pollen, Secretary,  
Fitzalan House, Arundel St., Strand,  
London, W.C., England.

Dear Sir:--

I have yours of the 29th of November. It was impossible for me to get a reply to you in time for your meeting of Wednesday next.

I have gone into the matter of future cost for briquetting experiments, and find it will cost about 250. When this has been completed and a satisfactory briquette produced, which can be done, Mr. Edison will make his full report as to cost, etc. He does not seek these experiments here, in fact, they take up a great deal of his time, but he does this work because he is greatly interested in the success of the Dunderland Company. He says, therefore, when he has produced these briquettes satisfactory in every way, that his work will be finished. However, he says that before the Dunderland Company go to the expense of erecting the necessary number of ovens at Dunderland, that one oven should be erected such as they would use at Dunderland, <sup>and thoroughly tested</sup> and it should be built either in England or here, so that there may be no chance taken at Dunderland. One reason that the Cement Mill has worked so well throughout, is that every unit of that Mill was made and tested here at the

S.H.P. #2.

Laboratory before being constructed at Stewartville.

I am glad to note the shipment of 80 tons of the Dunderland ore on the Steamship Toronto and we will be ready for it as soon as received.

Sincerely yours,

*H.E. Lick*

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295  
S. Bergmann, Esq.,

23 Oudenarder Strasse,

Berlin, Germany.

My dear Bergmann:--

I have been waiting to reply to yours of the 14th ultimo for your letter that you cabled was on the way.

I have your cable, saying that you charge 200 amperes and discharge 120; that is all right. Everything is sacrificed in this battery to durability, and we have it from Altmann & Company, of New York, that the expenses of a two ton delivery wagon are \$5.60 per day, and the expense of the current is 23 cents per day, so you see the current cuts no figure whatever.

Economy has been sacrificed for durability, which is the essential feature and in fact, the only feature for a commercial storage battery.

When I receive your letter, I shall cable you whether to turn those batteries over to your Professor at Munich or not. These cells will show the invention as well as any.

I have ordered for you a Studebaker automobile and it will probably be ready to be shipped in February. It is only a runabout but it is very durable and equipped with the battery should be able to make a run of about one hundred miles.

Mr. Mallory advises me that the special tools are being

S. B. #2.

hurried along and he will be able to ship about the first of February.

Everything is all right and you need not have any fears regarding the Storage Battery being a huge success.

Sincerely yours,

H. E. Dick

The General Electric Company have just realized that automobile motors are going to be a big business & they had their expert men seeing the Edison. As far as Westinghouse has the best motor showing an efficiency of about 70% while all others only show 50%. The G.E. Co. claim their motor shows 82% & they will send me one in about three weeks. You should give this some thought & as not to let anyone fool you. Will send you a few cells just as soon as I can get them.

H. E. D.

244  
262

12/16/02/HED/L

Captain F. R. Pollen, Manager,  
Edison Ore Milling Syndicate, Limited,  
London, W. C., England.

Dear Sir:--

Replying to yours of the 1st inst., I have shown your letter to Mr. Edison, also ~~sent~~ the copy of my letter of the 11th of November to him this morning, and he said that you would probably find Carbonate of lime close to shale or slate deposit. Limestone containing more than 3% of magnesia, cannot be used.

Whenever you find Carbonate of Lime of a suitable nature, you will undoubtedly find it in sufficient quantity. Before securing options, samples should be sent to Mr. Edison, for analysis.

Yes, it does mean that in your search for deposits, you are not restricted to the location of "Cement Rock", as you have formally been instructed to secure.

Mr. Edison just returned from Stewartsville last night, smiling and happy and says he has washed his hands of the Cement business. The Mill is running satisfactorily and I have just cabled you to this effect. Remember, that at present, there are only two Burners constructed ~~at present~~, and to bring the Mill up to its full capacity, six or seven more will have to be built; the reason for this being, that as these burners cost about forty



F.H.P. #2.

thousand dollars each, Mr. Edison did not feel justified in erecting the whole number until he was satisfied with the results he obtained from the first ones. After the plant has been running, say a month, a confidential report will be made.

The Rotary Kiln, Mr. Edison tells me this morning, can be first economically run on an output of 32 barrels per hour, that is to say, that this seems to be about the maximum output with the lowest fuel economy. A greater output seems to increase the fuel consumption out of proportion, and Mr. Edison believes that, with an output of 32 barrels, the saving will more than justify the erection of an additional burner, as he saves eight pounds of coal on every barrel at a 32 barrel capacity, as compared to a 40 or even a greater capacity.

We suggest at present, that nothing be said concerning the success of the Cement plant outside of a few trusted shareholders.

Very truly yours,

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12/16/02/HED/L

S. Bergmann, Esq.,

23 Oudenarder Strasse,

Berlin, Germany.

My dear Bergmann:--

Yours of December 4th, with charge and discharge curve of the progress cell received this morning.

You seem to have fallen into the error of almost everyone outside of the intimate associates with Mr. Edison in the battery, which is not unreasonable possibly for you, considering the short time you have had to spend in acquainting yourself with the merits of this invention.

In the first place, my dear Bergmann, this is a new invention and in order that it be a commercial invention, everything has been sacrificed, as I wrote you several days ago, for reliability and permanency.

The cost of the current is nothing as compared with other costs, for example, the cost of the current for operating the tube in London, is less than 6% of all the other costs, so that any little saving in the matter of current to them, would mean practically no saving at all.

The cost of operating an automobile delivery wagon in New York, is between Five and Six dollars per day, while from their books, the Altmann people showed us that the cost for the current

S.B. #2.

was only 23 cents per day. What is wanted, is a commercial Storage Battery and this Mr. Edison has, and it is a new invention, and the cells you have will show that it is a new invention as well as any that we can send you. Of course, the cells will improve and are improving, as would be natural in any business, but it is the same invention at all times.

The cells you took over were the best Mr. Edison had at that time. Many improvements have been made since mechanically, and there are some cells coming through now that will give better results than those you have. We do not know here how much time we have before the Patent Office. Please enlighten us on this point. We should have some of the new cells ready in a couple of weeks.

I am going to Chicago on Saturday but shall return about January first. Mr. Edison has seen this letter.

Very sincerely yours,

W. E. DeLo

295 ✓  
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12/18/02/HRD/L

S. Bergmann, Esq.,  
23 Oudenarder Strasse,  
Berlin, Germany.

My dear Bergmann:--

I enclose you a blue-print which is a rough sketch of the automobile I have ordered for you. This has been designed for me and I have ordered a duplicate to be shipped to you.

Shipment will be made sometime in February and will be a good serviceable runabout for you. It will contain 38 cells and should have a capacity of about 100 miles. It is well built and will stand almost any kind of hard service.

The cost, exclusive of the battery, will be in the neighborhood of \$700. but this price you must not quote, as we are getting these outfits very close to cost price. I understand the regular price will be in the neighborhood of \$1,000.

Trusting this will be satisfactory, I am,

Sincerely yours,

1/7/03/HRD/L

Lord Avebury,  
8 St. James Square,  
London, W.C., England.

My dear Lord Avebury:-

I am sending you a large photograph of Mr. Watson. He says he does not know you as "Lord Avebury", for from the time he was a young man, he has you fixed in his mind as "Lubbock", so he has signed the photograph - "To my friend Lubbock".

If I remember, you were to forward at your convenience, your photograph to Mr. Watson and myself and this is to remind you that up to this time, they have not come to hand.

With kindest wishes from Mr. Watson and myself, I am,

Sincerely yours,

H. C. Dick

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1/7/03/HKD/L

Mr. Fred W. Bright,  
1814 Spring-Garden St.,  
Philadelphia, Pa.

My dear Bright:--

I have just returned from Chicago and shall be here about three weeks. Mr. Edison expects to be here, with the possible exception of a day or two at Stewartville each week, all the time. I want you to come over at your convenience, and you had better advise me what day you expect to come, so that if by any possible chance he would be going out of town, I can wire you and arrange a day when he will be sure to be here.

If you do not hear from me in answer to your letter, you may rest assured that he will be here. I have explained to him how urgent it is for you to have a battery at the very earliest moment, and he agreed that you have the first battery that goes out, which will be very soon, as he understands that your whole automobile business is held up pending the delivery of this battery.

With best wishes to your good wife and yourself, I am,

Sincerely yours,

H. E. Dick

1287  
322 ✓  
1/8/98/HBN/L  
William Simpkin, Esq.,

The Standard Construction Corporation, Ltd.,

Mitsuban House, Arundel St.,

London, W.C., England.

My dear Sir,

I have received yours of the 22nd of December and also  
know of the 11th, which was held here awaiting my return.

I had hoped I would be here when you arrived, but I am  
sailing on the 7th of January and will only be here one day just  
before I sail. Mr. Farnham leaves for Florida about February  
20th, and he told me to say that in case you were delayed for any  
reason, you might come down there to his house and see him.

Hope all you say and I am sure you are doing what you  
think is best for all concerned.

Sincerely yours,

*H. B. Smith*

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1/8/05/HED/L

H. F. Parshall, Esq.,  
 Salisbury House,  
 London, Wall,  
 London, E.C., England.

Dear Mr. Parshall:--

I have pleasure on my return from Chicago, of the 22nd of December, and note what you say.

I have a most surprising and favorable report to make on the battery at this time and that is, Mr. Edison has recently found out how, by assembling and manufacturing the battery on a little different line from his original standard cell, that it is possible now to triple the discharge and charging rate without sacrificing anything. As soon as one of these new cells is complete, I am going to send <sup>you</sup> ~~it~~ to you to play with.

I sat up well through <sup>last</sup> ~~the~~ night with Mr. Edison ~~last~~ night and we were estimating the great economies which could be made with station batteries such as he is about to construct. "He is designing and will shortly make one station battery cell. It will have a capacity of about 40 horse power hours and will be sold to the trade for about \$25. per H.P. hour. Mr. Edison says there is no reason why the station battery cell (which can be made much heavier than an automobile cell) should not last 100 years or



H. F. P. #2.

practically indefinitely, as the alkaline electrolyte, of course, preserves the steel.

We estimated that on a New York lot 25 x 100, say, in the residential district, 50,000 H.P. hours could be stored without any difficulty whatever. I believe that we will see your branch of the business given the greatest impetus it has ever received by the introduction of this battery.

I could send you a cell to-day but it is not constructed with the new improvements <sup>for rapidly</sup> charging and discharging, therefore, I prefer to wait for a few weeks until we can get a few dies made necessary to make the new cell.

Sincerely yours,

*H. F. P.*  
*P.S. This battery can now be charged  
and discharged in one hour.*

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1/6/03/HRD/L

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Captain F. H. Pollen,  
 Petrean House, Arundel St.,  
 London, W.C., England.

My dear Francis:-

I have yours of the 19th inst. and note carefully all you say.

I am of the opinion that Lehmann is getting Paresis, and it's a great question whether he is going to be of any advantage to the Syndicate, unless he braces up and get his wits about him.

The Cement Mill is running continuously but if there were eight Roasters running, they would be in trouble, for this reason, and it is a most remarkable condition that they are confronted with at the present time. It is only because the Crushing plant's capacity so far exceeds the Roaster capacity that they have been able to run for the last two weeks. This is not caused by any fault in the construction of the plant but by this fact, that in the Cement Rock Quarry, the rain, of which there has been considerable in the past few weeks, has permeated all through the layers and frozen; then ~~the~~ <sup>every</sup> day or two it would rain and freeze again. This has caused the layers of the cement rock which are extremely thin, to foliate like the leaves of a book, and the result has been that so much ice and soft clay (of which there are several seams a few

F.H.P. #2 .

fact apart) have gone in with this cement rock that it clogged badly and the capacity of the dryer did not seem to be great enough to overcome this difficulty.

These poor results I mention happened when the Crushing plant was run to its full capacity; by running it one half capacity it caused very little trouble; yet, there is this feature which must be remedied. An easy way out of this trouble and what Mr. Eaison always intended to do was to put a roof over that portion of the Cement Rock ~~quarry~~ <sup>in a tank</sup> that he was using, and every time a blast was made, the roof would be run back to a line of safety and then brought forward again after the blast. If the weather would stay cold, so the rock would be frozen solid, there would be no difficulty. It is this alternate freezing and thawing, which has made the trouble, which, of course, you understand is only temporary and as soon as the roof is constructed, there will be no further trouble.

The Mill is running right along and the Roaster has never been shut down one minute since it was started.

I give you an account of all these little troubles, so that you may fully understand the situation just as it is. When mining the limestone, there is no trouble of this kind, because it is solid rock in which the rain and clay cannot permeate.

Sincerely yours,

F.H.P.

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1/8/03/HEP/L

S. Bergmann, Esq.,

23 Oudenarder Straasse,

Berlin, Germany.

My dear Bergmann:--

I have nothing to report but the most favorable news. Mr. Edison has recently discovered how to triple the discharging and charging rate of the battery without sacrificing anything. The curve he will be able to get is far better than a lead battery can ever prove in practice, and the economy can be made even greater in station batteries than lead.

Think, Bergmann, what it means to discharge or charge an automobile for station batteries in one hour. It means that safety fuses will have to be applied on every motor using an Edison Battery, and it means that you will go up a hill <sup>about</sup> at the same rate of speed that you practically will on a level. As soon as it is possible to make a cell, the mechanical construction of which has been changed a trifle to meet these new requirements, I am going to send you one. The experimenting will all be over in one week and it is then up to the Factory to turn out batteries.

The new station cell, we expect will sell for about \$25. per horse power hour and each cell will have a capacity of <sup>about</sup> 40 H.P. hours. This is going to put new life into the electrical business and you will see within the next few years an expansion in

S. B. #2.

this line which will surprise even an old Manufacturer like your-  
self.

I have yours of December 20th and we are anxiously await-  
ing the Seubels translation of Professor Doctor Foerster report.  
We have found a reference which knocks out the Younger patent com-  
pletely, but please keep this to yourself, as I want to keep this up  
my sleeve for future use.

I have reports from London showing that everything is  
working most satisfactorily for you and you have already had allotted  
to you the first contract.

I am sailing with my family for Paris on the "Blutcher",  
on February 7th. I shall leave them there for several weeks, while  
I go to London, and from London I will come to Berlin for a day or  
two; then back to Paris and down to the South of France and Italy.

We are all well at the present time and with best wishes,

I am,

Sincerely yours,

*H. B. Beck*

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1/9/03/HEB/L

George Ainsworth, Esq.,  
Consett Hall,  
Consett, C.O. Durham,  
England.

My dear Ainsworth:--

I am glad to hear that you have at last received the photographs and I have just handed Mr. Edison yours. He asked me to thank you for it.

I am glad to hear that Bergmann secured the order upon price and quality. No one can make better goods than he and many turn out work which is much inferior.

When Simpkin arrives, Mr. Edison is going into the briquetting problem with him thoroughly. He asked me to say, in his judgment, there is no need of any alarm in this direction.

I am sailing on February 7th, with my family, and we shall first go to Paris, where I shall leave them until I go to London and Berlin. Afterwards, we expect to spend considerable time in Italy.

Sincerely yours,

316

1/13/03/HED/L

My dear Bergmann:--

I have your two favors of December 29th. Yesterday, I cabled you as follows:

"Latest results Nickel battery shows much higher discharge rate than lead, with far greater economy and no depreciation; weight 67# Kilowatt hour;- Inform German Traction Companies. Mailing curves. (Signed) Edison."

The reason for our sending this was that there were so many cable dispatches in all the papers Sunday from Berlin, showing the lead batteries were a failure and that the Traction Companies were about to put in the underground trolley which would cost a very large sum of money. We thought under these conditions, you should be informed as to the latest results here. Mr. Edison did not believe so at first but came around to my way of thinking and together we got up the cable, and I prevailed upon him to sign it.

The fact is, Bergmann, that this battery is simply "out of sight." The curves are about the same whether the battery is charged at normal or several times normal or discharged in an hour, or discharged in six hours. It don't seem to make very much difference. These curves spoken of in cable, I doubt if we can complete to send you before one week.

To put it in a simple way, when a lead battery is new, to

S. B. #2.

get the same output, it would require a battery four times as heavy as the Edison battery. I am sure these curves will be a revelation to you and this great improvement has been brought about by a simple change in the mechanical construction only.

With best wishes, I am,

Sincerely yours,

S. Bergmann, Esq.,  
Berlin,  
Germany.



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1/22/03/HRD/L

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S. Bergmann, Esq.,

23 Oudenarder Straase,

Berlin, Germany.

Dear Sir:--

I was over to Glen Ridge yesterday and Mr. Hays showed me a letter which you had written enclosing cut of press you think of buying, and I at once cabled you as follows:

"Do not buy press or anything for battery until you receive my letter; changes made."

I have stopped work on the Briquetting machines as these will not now be needed; without going too much into the detail, as it is hard to do so by letter, I wish to say that Mr. Edison has made the recent great improvements by making the pockets just half as thick and loading the active material dry. This will simplify the manufacturing proposition very much and the results he has obtained are most surprising.

At the Automobile Show, where a battery is on exhibition, it has created the most intense interest. He has written a card and signed it as follows: "An Edison battery weighing 460 lbs. in a Baker Runabout, runs 100 miles at an average speed of 10 miles an hour. On one hours charge, it will run 75 miles, over fairly level New Jersey macadamized roads. Reducing the weight of the battery reduces the distance in about the same proportion. This

S. B. #2.

battery can be completely discharged or overcharged without injury."

Mr. Edison is testing a motor designed by Mr. Churchward, of the General Electric Company who has charge of their small motor work. It is believed that this is the most efficient motor yet produced. Mr. Churchward has this patented abroad and he said he would come over and see me this week regarding the Foreign rights. If it should prove to be an ideal motor, perhaps a working arrangement might be made whereby you could make the motor. This I will look up thoroughly and talk over with you when I see you the latter part of February.

Sincerely yours,

*H. B. Smith*

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1/22/03/HBN/L

Joseph Laurence, Esq.,  
 c/o Linotype Company,  
 186 Fleet Street,  
 London, England.

Dear Sir:--

I received yours of the 28th of December several days ago but I have been working every night with Mr. Edison until midnight and sometimes later, so it seemed to be almost impossible to get time to catch up with my mail.

I cabled the Syndicate yesterday upon receipt of Captain Pollen's letter and also one from Mr. Rudd, and I am to-day writing the Syndicate a very plain letter which, of course, you will see. I write you this part separately, as I do not want to drag Arthur's name into the matter before the other Syndicate members.

I have tried to keep the Syndicate posted as to every movement made here re Cement and when Arthur was here, ~~consequently~~, I told him what Mr. Edison hoped to be able to do and at the same time he understood that we had only two burners built, whereas we shall probably use nine or ten. You can easily see, that with the crushing capacity of five times the burning capacity, you cannot get results, but from what had already been done, it was an indication of what might be done with the full burning capacity at the Mill. I did not tell him that we had the coast down to the

J. L. #2.

price you mention and might get it lower. I said, that taking a careful survey of everything and the splendid way which every part of the plant responded to its work, that we probably could attain these results. It looks to me that Arthur has given these points which I gave him in confidence, as facts, and that you have gone ahead on this supposition, which is a grave error.

Regarding the Dunderland shares which the Directors are to receive, will say, that I do not want you to divide with me. What I want, is to have every Director satisfied, even though I do not receive one share for myself and I feel that Wallace has been in from the beginning, we must be fair with him.

I have this morning yours of the 9th, enclosing clipping from "Financial News". I have showed it to Mr. Edison and he cares nothing about it.

We are all well and I thank you for your kind wishes, which I return.

Sincerely yours,

*J. E. Guen*

326 ✓  
344  
1/25/03, HKD/L

S. Bergmann, Esq.,  
23 Gudenorder Strasse,  
Berlin, Germany.

My dear Bergmann:--

I am much obliged for your favor of the 8th inst. enclosing report from Professor Forrester.

When Dick goes over, he will have a small cell for Professor Forrester to play with, and he will be amazed with the results he is sure to obtain.

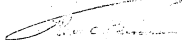
Referring to that part of your letter where you say that it has leaked out that you are going to have the manufacture for Germany, I must say that this is a great surprise. It was never intended that you should manufacture the battery in Germany or elsewhere but that you would be one of a number of strong firms who could be asked to join me in this business. The shipping of a few tools to you was for the express purpose of showing the manufacturing side of the business and not for the purpose of making batteries to sell.

Now, Bergmann, this was all well understood between you, myself and Dick. Dick is to do the financial part of the business; I am to furnish the battery; you are to look after the manufacturing and that is the manner in which this proposed business must be conducted. After Professor Forrester has had time to criticize

S. B. #2.

the new cell which Dick will give him, I would like to have him  
make a new report.

Yours very truly,



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1/22/03/HEN/L

F. H. Pollen, Esq., *Managing Director*  
Fitzalan House, Arundel St., Strand,  
London, W.C.

Dear Sir:--

Referring to yours of the 7th of January, I herewith hand you a memorandum made by Mr. Edison, which will answer your questions satisfactorily.

We will send five barrels of cement to the Consolidated Gold Fields of South Africa, as you suggest, for testing. Before Simpkin comes over, you had better find out just exactly what is wanted with the gold ore from South Africa, which we have received; just how fine they want to crush it and all the particulars, and give same to Simpkin, and when he returns, he will be able to give all the information required.

I cabled you yesterday, upon receipt of two letters from Mr. Rhodes, as follows:

"Why this rush with cement. You have no deposit, no data from mill here, nothing to offer. No satisfactory proven production cost can be given until Roaster plant complete. Exploiting Company now means blasting Syndicate prospective cement profits. Wait for letter."

You are putting the cart before the horse by your proposal to bring out a Cement Company at this time. You will remember,

F.H.P. #2.

that I wrote you sometime ago, stating just how we thought would be a commercial, businesslike way of bringing out a new Company.

First of all, we said you must find a deposit and send to Mr. Edison samples for assay which he will have made at the Cement Laboratory and charge only cost for the work. Then, when a suitable deposit is found, secure an option on same and ship 500 tons or less of the Cement rock to Stewartsville, where it will be made into cement and shipped back, then there can be no controversy as to whether the deposit is suitable or not, for you will have the cement made from it.

I also pointed out that the capacity of the Roasters at the Cement plant are only about one fifth of the capacity of the Crushing plant and that owing to the great expense in building these roasters and also that they were more or less experimental, being on such large lines, that Mr. Edison did not care to invest over ~~2,000~~ <sup>2,000</sup> thousand dollars (the cost price of the two roasters) until he was satisfied that they were all he hoped for. After these roasters have run several months and if they do not show any defects, the additional roasters will be gradually added, until the Roaster plant is complete. Enough, however, has been proven so far by their work, to give Mr. Edison a good indication of what will be done in lowering the manufacturing price of cement by the full equipment.



F.H.P. #3.

You must remember, that every statement you make regarding the cost production of cement by this process, will be challenged and fiercely challenged, and unless you are in shape to show a going business, producing cement at the cost you state, you will find yourself in a most ridiculous position.

If you and Mr. Rhoads sail on the 21st of February, you will find the Cement plant running and can form your own impressions from it. Mr. Edison will be in Florida and I will be on the other side, but you will be most welcome and Mr. Darling, will take good care of you; but you will not at that time be able to procure such figures as would be useful for a prospectus, for you can understand that if one portion of the plant has a capacity of five times another portion, the net cost of producing cement under these conditions will be abnormal as compared to a complete Mill. You will be able, however, to satisfy yourself, for you seem to be somewhat incredulous that cement can be made at a much less cost than any other process. For our part, we cannot conceive why a Company should be even thought of without a deposit. The more you talk Cement Company, the more you raise the price of favorable properties against yourselves. This should be a very pretty proposition if it is not rushed. Here will be a going Cement business, producing a certain number of barrels at a certain price;

F.H.P. #4.

that will be the condition on this side. On your side, would be an equally good quality of cement rock, advantageously located, a portion of it having been shipped over here, made into cement and returned to you subject to anyone's inspection and test and there you would have the data from this side and the cost price. From your side, the conditions being similar, it would be only reasonable to presume that cement could be produced equally as cheap as on this side. If this is not a clearly commercial proposition, I have never had one brought to my attention; but, on the other hand, if what you are proposing to do now; rush off, form a Company without a deposit; without data, without anything, and rush pell mell into the business, you will find yourselves simply pulled to pieces; and our prediction is, the flotation of a Company at this time would be a dead failure, and in fact, we are against it. The Syndicate has a great future in cement and there is no good reason why the business should be jeopardized in its incipency by undue haste.

I enclose a letter for Mr. Sampkin.

I note another opinion by Mr. Norberg-Schultz, of Norway, regarding the Wetherell patents. When I was there last, I stated that before any more patent cases were submitted to anyone, the patents in question should be first submitted to Mr. Edison so that

P.R.P. #5.

he could give you all the necessary data. No one is able to judge a patent by itself, it must be taken into consideration and conjunction with all other patents in all other countries, and as Mr. Edison in the Pioneer and knows more about this particular business than anyone, he should be consulted, before such action is taken and you are simply inviting trouble by getting expert opinions on individual patents. The Wetherell patent was taken to Germany and sold for a large amount of money. The Company who sold it, afterwards gave up its charter and went out of business, solely for the reason they were afraid they would be called upon to return this money and this is well known. Mr. Edison has numerous patents on this art, antedating the Wetherell patents and it is unjust to him for you with your limited knowledge of this subject, to be seeking expert opinions without first consulting him.

*Wm. H. Dick*

(CONFIDENTIAL.)

1/23/03/HRD/1.

Wm. Rhoads, Esq.,

Flore Fields,

Weedon, England.

My dear Rhoads.

I have your two favors, one of January 6th, the other not dated.

I have written a full and comprehensive letter to the Syndicate re cement, as we see it on this side. I should arrive in Paris on the 15th or 16th, and after taking two or three days to get settled with my family, I shall come to London and be there before you sail on the 21st.

You will notice in my letter to the Syndicate, and you have undoubtedly seen the cable I sent, which was approved by Mr. Edison, it is a problem to us here to see how anything can be done toward the formation of a Cement Company at this time. However, all of this is explained in my letter to the Syndicate, so that I need not burden you with it here.

So far as your being Chairman of the Company when it is formed, I will say that it meets with our unqualified approval, and this feeling also extends to Mr. Hawksley, who will hereafter, conduct any legal business that I shall have in England. I have ordered five barrels of cement to be sent to South Africa, as requested.

W.R. #2.

So far as the detail of the new Company is concerned, I am willing to leave it to Hawkeley largely, being satisfied that he would protect the interests of the Syndicate, stipulating, of course, that Mr. Edison should have what I consider, his rights.

The profit will, in all probability, be considerably more than you state. Cement has been selling f.o.b. at the Mills in this Country until the cold weather set in, at \$2.25 per barrel or 400 pounds. At present, (the weather prohibiting its use) the price is from \$1.75 to \$1.90. I have not the figures at hand at present, giving the total consumption but it is in all probability, close to twenty ~~more~~ <sup>million</sup> barrels and the demand is increasing beyond the capacity of the Works to supply.

I enclose a clipping from last week's Cement paper which will give you some idea of the imports from different countries, which is given in pounds. Wages abroad, I believe would be somewhat less and fuel would be about the same. From here, I cannot say how soon the patents in South Africa must be worked and it would not be such a tremendous expense to erect a small Mill in South Africa, provided the material was there, to protect the patents. This Mill would yield a good profit and could be enlarged from time to time.

I see that you have been inoculated with the Edison

W.R. #3.

improvement mania. Nothing has been changed at the Mill and this improvement you speak of was brought about by Mr. Edison's efficient machinery and plant which enables him to make the same quality of cement all the time without any risk of poor cement, as is the case with every other process. This great efficiency of the plant permitted Mr. Edison to take out a process patent to protect himself as well as our associates and it was for the good of the Syndicate that I did not mention this in detail. We have learned that our confidential communications to the Syndicate are in turn repeated to confidential friends until the subject becomes common knowledge, and we wanted to protect ourselves and you at the same time.

I should like very much to meet you with Mr. Hawkeley on my arrival. I am sure that any clear headed business man can see the great danger to us by prematurely exploiting as fine a business as the Cement business will be. Mr. Edison has written Mr. Pollen just what he is to look for in the way of Cement material and he is not limited to one class of material.

I wish you would get the letter that I have written to the Syndicate and show it to Mr. Hawkeley and Mr. Rudd. Always keep in mind, my dear Rhoads, that the location of a cement deposit

W.R. #4.

is the important item.

With kindest wishes to Mr. Rudd, Mr. Hawkeley and yourself,

I am,

Sincerely yours,

*H. E. Quirk*

(Enclosure)

1/23/03/HED/L

Mr. W. H. Carlin, Electrical Engineer,  
Rand, Macnair, Limited,  
Johannesburg, S.A.R.

Dear Sir:--

Your favor of December first to Mr. Edison has been referred to me, as I look after the Foreign business.

It is not Mr. Edison's intention to build automobiles but only to furnish the batteries. We are commencing this month to turn out a few batteries and the output will be gradually increased as soon as the special machinery can be made and installed. There are no serious difficulties in its manufacture and it has only been a question of building automatic machines to do the work cheaply.

You might be interested in learning that the Edison battery weighing 460 pounds, runs a Baker runabout 100 miles to a standstill, at an average speed of 10 miles an hour throughout, over fairly level New Jersey macadamized roads. One hours charge will run the same vehicle 75 miles; lessening the weight of the battery reduces the distance in about the same proportion. The battery can be discharged completely, overcharged or left discharged without injury.

The above was signed by Mr. Edison and posted at the Automobile Show in New York. It will be some little time yet before Mr. Edison will build station batteries and it will be



W.R.C. #2.

several years before he can equip a factory of sufficient capacity  
to furnish the demand for the automobile business.

Trusting this has answered your inquiry, I am,

Sincerely yours,

7.6.



1/23/03/REED/L

John Quinton Bruce, Esq.,

P.A.S.I.A.,

94 King William St.,

Adelaide, S.A.

Dear Sir:--

Your favor of the 18th of November to Mr. Edison, has been referred to me, as I attend to the Foreign business.

I will give you a statement <sup>for</sup> Mr. Edison, signed and posted at the Automobile Show, which is being held this week in New York. It was this:

"My battery weighing 460 pounds runs a Baker automobile containing one person, 100 miles to a standstill, over fairly level New Jersey macadamized roads, at an average speed of ten miles an hour. One hours charge will run the above mentioned vehicle 75 miles; <sup>2</sup>reducing the weight of the battery reduces the distance it will go in about the same proportion. This battery can be discharged completely and remain discharged, overcharged without injury'.

Always remember, that the cost of the current is the least of the costs in an automobile. The records from the large Department stores in New York, who are using electric automobile wagons, show that the cost of the current is only 23 cents per day, while the whole cost is about \$4.00 per day. In any event, the Edison

J.O.B. #2.

✓

battery charges as economically as any. We shall have no batteries for export, as it is our intention to establish factories in all principal countries of the World, to control their manufacture and sale. The price will be in the neighborhood of 13 per horse (<sup>£13</sup>) power hour for automobile batteries.

Truly yours,

H. G. Dick

330

1/24/03/HKD/L

S. Bergmann, Esq.,

25 Odenburger Strasse,

Berlin, Germany.

My dear Bergmann:--

I have just received yours of the 10th inst. and have read Professor Foerster's report with great interest. I am anxious to hear what he will say when he reports on the next cell, which I shall bring over. He will be very much surprised, I am sure.

His fee is most reasonable and Mr. Edison was especially pleased with this and suggests that he be employed for future work when necessary. The iron side has considerably more capacity than the nickel. ~~It~~ <sup>this</sup> It is hardly necessary for me to say Mr. Edison has known <sup>all</sup> the time but it has not the great advantage which he states.

With best wishes, I am,

Respectfully yours,

H. E. L.

2/4/03/HRD/L

My dear Bergmann:--

I have your two favors of the 20th and 22nd of January. As previously advised you, I am sailing Saturday with my family on the Bluecher and will go direct to Paris and from there to London and from London I shall come to see you for a few days and go into all this matter fully.

The battery as it is now, compared with when you saw it, is at the ratio of 1,000% to 100%. All experimenting has ceased and it is now a question of getting ready for the Manufacture. Nothing but the grid die is the same as when you were here, therefore, everything has been stopped until the new machine designed for filling the cups with dry active material and closing them in place is complete, which will be quite soon. The results from this final change as far as efficiency and charging and discharging at a high rate, is something marvelous. I shall bring a small cell with me only and on which I will have Foerster make a report, same to be held until he gets a large cell to confirm the results of the small cell.

Although my automobile is ready and the battery tests out more than 200 watt hours per cell and is splendid in every particular, I have decided not to take it just now but to wait for the new battery and have it sent over later. I do not want to be in the position of explaining that the battery I have is different

S. H. #3.

Don't let the ones in process run wild! Don't mention Jungner patents to anybody. It only dignifies their status and there is nothing we have to fear. Push the issue of our German patents as fast as possible, as we want to see it arranged as soon as we can conveniently.

I'll stand back of you to wire to Mr. Wilson. As you are so busy I will be busy taking everything on plate and will keep others to the point and waiting for it.

Sincerely yours,

S. H. #3, M.D.

Berlin, Germany.

**Edison Ore Milling Syndicate, Ltd., and Related Companies  
Letterbook, LM-282**

This book covers the period April 1902-January 1908, with most of the letters dating from 1902-1904. The letters consist primarily of instructions, sometimes accompanied by drawings, from Edison to draftsman William Simpkin regarding the plant and machinery at Dunderland. Some of Edison's comments pertain to the receipt of Dunderland briquettes at West Orange and to plant operations at the Edison Portland Cement Co. in Stewartville, New Jersey. There are also letters concerning drawings from the New Jersey and Pennsylvania Concentrating Works.

The flyleaf is inscribed "Aug 12, 1902 - Jan 29, 1908 Dunderland Iron Ore Letters." The spine is stamped "Letters." The book contains 995 numbered pages. Pages 180-925 and 963-995 are blank; pages 100 and 102 have been removed from the book. Approximately 40 percent of the documents have been selected. The unselected items are primarily duplicates of letters that appear in the Standard Construction Corporation, Ltd., Files, General Letterbooks Series, and Document File Series.

Sept. 2, 1902.

Dr. Theo. Lehmann,

Dunderland Iron Ores Co.,

Mo th the Fjord of Rønnen, Norway.

Dear Sir:

We shall want some clay and also some feldspar for briquetting. Please delegate to one of your men the task of finding feldspar around Dunderland or within fair shipping distance, also have him sink small holes in the bottom lands along river and creeks for clay. Get as many samples from all localities you can as I want to get the phosphorous low. Some feldspar and clay are high in phosphorous and others are low. Potash or soda feldspar will answer. The more iron in the clay the better, a brick clay is preferable; send samples as fast as you get them; send two pound samples as the smallest amount, four pound samples would be better, also send all kinds of Gneiss and Granite, as we can use that if of right kind. Our briquetting mixture is sixty feldspar and forty clay.

Yours,



Sept. 2, 1902.

W. Simpkin, Esq.,  
London, Eng.

Dear Sir:

Arrange at once so we are shipped about one hundred tons  
of the ore from the deposit we are going to work. Use bags or barrels.  
Want it for magnet and briquette testing.

Yours truly,

Sept. 8, 1902.

Dunderland Iron Ore Co.,  
6 Clements Lane,  
London, E. C., England.

Gentlemen:

I enclose photographs of the two kilns and furnace at the Laboratory and of the briquettes. Our experiments have progressed to such an extent to warrant the building of a tunnel furnace, the brieker and cars will probably be finished within a month. We have succeeded in making a satisfactory briquette. The difficulties that have arisen are due to the peculiar character of the specular ore. There is no trouble in briquetting magnetite and other ores. As soon as tunnel furnace is working I will make a shipment of briquettes.

The total expenditures to date for kilns, furnaces and experimenting have been \$5260.25 of the five thousand authorized. A further sum will be necessary as I want to get the forming apparatus so simple that three men can attend to furnaces. I expect the output per furnace to be from 125 to 160 tons per day.

Yours,

9/9/02/WEM/L

The Dunderland Ore Company,  
London, England.

Dear Sirs:--

Commencing September first, I have arranged to have our Mr. Herter located at Stewartville to keep track of all changes and adjustments which I have made or may make in our machinery, so that you will have the benefit of them in the designing of your plant, and I propose to charge his time and expenses to you from that date.

Will you kindly advise whether this will be satisfactory.

Yours very truly,

Letter No. 10.

Sept. 27, 1902.

Wm. Simpkin, Esq.,  
London, England.

Dear Sir:

For the last two weeks I have been sweating blood over the spouts leading down from the S. to Roller feeds of blowers at Chalk blower. I wrote you that I changed the spouts, raised the angles and massed the ends altogether and dumped right on top of them, doing away with the inverted Y and using a separate spout for each blower. Well I have come to grief day before yesterday on account of segregation of ore in Bijou by coarse stuff rolling down cone and fines staying in middle and raising of air pressure on rolls the fines were much increased. Every chute blocked even the 60 angle chutes. The ore was bone dry yet the moment the fines increase beyond a certain amount you can ball it in the hand and throw the ball up 6 inches and back on hand without breaking. The pressure in the spout bricks it into a solid column. We found yesterday by experiments that it will stay in a vertical pipe.

You say that you think of using feed holes at the blowers instead of the roller feed. I am sure that this will be unreliable and these holes can not be used until the impalpable dust is blown out, it is surprising what a slight accession of dust will do above a certain amount. At Dunderland we shall have to contend with very wet weather over long periods and it is not a certainty that we will

W. S.

have our ore dry at all times. At Edison we had the same Dryer as at Stewartville but we found that many days each month the ore coming from the stock house when crushed to 14 mesh was so damp that we had great trouble in getting it through the screens after magnetic separating. We were compelled to build another and smaller dryer to dry it so we could crush it to 40 mesh and screen and separate on the other magnetic separators. We have the same trouble at Stewartville but as the pile of ore is moved from its original dump to another and returned with a hot blast of air going through stock house it gets perfectly dry. Of course the ore at Edison had a great tendency to hold moisture by reason of the large amount of decomposed or kaolinized feldspar and the rotten cement rock here is very much more difficult to dry than Dunderland which is ideal, still we do not have a second dryer as at Edison or a mixing belt as in cement and taking in consideration the bad weather at Dunderland over weather here I feel pretty well assured that the feeding by holes to the blowers will be a source of endless troubles; at the magnets it will be O. K. Ballentine uses holes here on crude ore but our crushers do not make fines like the S. High and the ore is very dry so there is no comparison with actual conditions.

We are now constructing at the S. dumps at Chalk blower two feeds instead of roller feeds, feeding into the spouts we use two screens and run the two screens by a sprocket from the lower pulley of the S. by a single chain and idler. We use a two and fifteen shaft with our regular bearings. On one end the screw pitches in one direction and on the other end it pitches in the opposite direction. The pitch is 6 inches. Thus each screw carries ore to

#3 W. S.

the right and left and at each end the spout is made square about 6 inches from end of screw thread, the stream is split by a sheet of iron and drops into two spouts. Thus one shaft with its double screw serves 4 spouts, the other screw the same number. The angles of spouts at 60 & 55. The feed is set to give a little less per hour than the roller feed below, in our case 18 tons is fed by the screw into the spout and the roller feed is set for 20 tons. I have provided for any contingency by putting in an overflow at roller feed hopper at blower, so in no case can the chute or spout fill up. There is no trouble to run loose ore, I will send you complete sketch when we are through with the experiment. Herter is still sick and but hopes to return Monday, otherwise you would have received the sketches previously promised.

In re the pinions on the drive of 5 ft. rolls. At Edison we had as I previously informed you, trouble with the pinions breaking, so you can not make them too strong. We had the shaft at first with its bearings on 12 x 12 timbers but the terrible thrusts on the pinion when it had to shear the 5/8 shear pins tore the bearings away from the wood. You will have to have well anchored bearings and short centers and heavy shaft. I suppose you will connect the motor by a shear pin coupling. This is alright but as my forethought is not so long that it sags in the middle I suggest that the gears have a bronze bush and be put on the shafts like the drive pulley on 3 High at cement, and proved with shear pins and in addition a row of bolts. At first you can use the shear pins and after a while you find that the motor shear pins is all that is required you can then put in the bolts and dispense with the shear pins on gears. It is internal stress that I fear.

#4 W. S.

The more I see of the 3 High housing, the weakness of the ends the more I am in favor of the giant style of housing for the 5 ft. rolls.

Here is a pointer I forget to tell you about when speaking of bad effect of narrowing chutes abruptly. fig. 1 shows the roller feed feeding stuff from bin to belt going to Bijou. The corner X caused a build, C remained stationary and D kept flowing, the ore backing up considerably and reducing capacity very much. Dotted line shows remedy. The mouth had to be widened from 10 inches to 16 inches. It will be difficult to say how many tons of ore you can feed your blowers per hour, your stuff will have no coarse in it and you should have Ballentine determine the actual amount on our Laboratory blower. This fine ore with no coarse will also act different. We prevent to a great extent segregation in Bijou by spouts we have just put in. We use 4 spouts, dividing the ore into four parts as it comes off the belt. It is quite essential to use these distributing spouts in crude stock house for drying and also for the purpose of preventing the 3 Highs running on fines at times and then entirely on coarse.

We are having trouble with segregating in coal stock house, wet fine coal in center of cone will not run out at all.

Yours truly,

fig 2

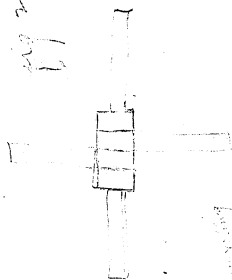
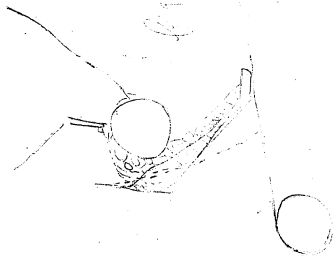


fig 1



the same as the  
one in the  
fig 1

fig 3





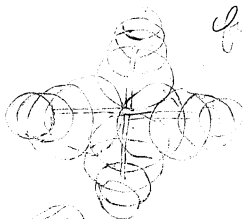


Fig 1

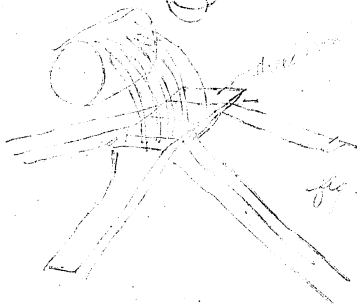


fig 5

Letter No. 11.

Oct. 6, 1902.

Wm. Simpkin, Esq.,  
London, England.

Dear Sir:

24 inch belt as return from Dryer to Rolls will be ample. The chute should spread returns on belt fairly well so picker can see bolts, etc. Regarding Chutes. They are by far the most serious thing we have had to contend with here, so better send detail of all chutes to me. The Distributor on top of dryer is an enormously important detail and ours here should be exact copies without the slightest change. I have not gone over your dryer shaker details as Herter is now well and we have finished the giant roll drawings which I will describe further on. The giant roll plates should be chilled a full one and one quarter inch.

All our chutes in rock stock house were too near the belt, couldn't get but 125 tons per hour as the ore from one blocked the others, men have been in there several days cutting them off, now five inches from belt. It takes 3 hours to take a motor out of the tunnel on account of no room. Twelve feet wide with a 36" belt in the center is none too wide to clean out drip and get at things. One thing you should allow for with excessive liberality where one belt dumps to another at a place depressed into the ground. On your general plans which arrived here this week, I see there are several such places. The drip and also the removal of motors, etc. is a serious thing at times where delay is great from want of room.

#2 W. S.

Regarding the drip from belts: There are a number of places here where it is impossible to get even a hoe under to clean out the drip at head pulley, for instance, the dump of conveyor bringing returns back to chalk 3 High there is no space and we are compelled to keep two men there to keep belt free until we can change it, also there is no room to work in and altogether its a horrible proposition. The leakage down into the room below was so great that one couldnt see five feet. We were compelled to use a hermetically sealed floor since which the 3 High floor has scarcely any dust.

Dont use any iron set in the brick work of air vent or fire doors at Dryer furnace use brick arch, also the doors should be faced with fire brick so that no iron is exposed to radiation or flame. We have a fire door with brick around most of the face exposed but the iron exposed is melted. The square casting set in brick work for the air vent above fire door has all melted.

I think you better send your redesign of mill motors which will be employed. We have found a lot about motors. The oiling, brushes, crossing of armature and fields, stability of base, etc. We have a fan on armature to internally circulate air within the chamber to a success. Do not attempt to use the end of the motor shaft for a fan, that is a failure, use the regular desk fan and secure it firmly at the opening in gunny. We have changed our gunny chambers considerably. There is a very decided relation between the square feet of gunny and the horse power of the motor. We can give you this when you are ready. There must be no leaks into the chamber except through the gunny itself.

I think you better send drawing of the removeable baffle plates of the blowers so one can be made and actually tried by

# 3 W. S.

Ballent<sup>1</sup> on Norway ore in the Laboratory dust blower to get it right and obtain proper data as to speed, fans and feed per hour.

I spoke in a former letter about the great trouble we have had with the chute under the 3 High chalk. Well we have had to make another change it would block up. We make the chute the full width of the inside of the housing, run it down straight it delivers ore at right angles to belt but the ore strikes the opposite side of chute before it reaches belt and dont scatter fig. one there are wooden extensions to keep ore scattering.

Did you know of the serious mistake somebody made in the chute from the highest elevator down to the screens in the clinker grinding plant, well the angle is 45 all right but its side angle is only 26 degrees and nothing will go through it and we hav'nt the height of the elevator to correct it. I have sometimes thought that I would like to take the man who made that chute boil him in oil and hang him in hell to dry. I am going to get 500 tons an hour down there somehow but just how I do not know except to raise the elevator, all of which shows how dead easy it is to design a crushing plant.

Now for the Giants. 1st. Make the plates of equal length. They can then be exchanged so that the ends which gets no wear can be shoved to the middle and thus double wear got out of them. The wear is mostly in the middle. The holes in the mandril should be laid out very accurately, otherwise there will be great trouble to exchange plates. I have had Horter lay out a sketch to explain matters. Make the mandrills solid dont core out anything where you have shown it. Use only four sections, face only the outer edge

#4 W. S.

of mandrill sections. Have changed the sections of the shaft a little from your sketch. Notice the coupling.

That side extension on big girder better be made separate and of steel. The wooden separators should be split as shown so we can make changes if found necessary without necessity pulling out long bolts. The washers on long bolts should be white pine at first to ascertain if they crush. The hardest kind of white Quartzite will crush the pine and if they crush use maple. It will give us an idea how hard the rock is.

Dont use thrust collars at both ends of a roll. The fitting is difficult and if anything moves to separate housing etc. there is trouble. Use thrust only at one end, then there is no trouble, you have flexibility. The thrusts on the giants are particularly terrible at times. The thrust should be so the Rabbit shell can be removed quickly without having to bother too much with thrust devices. The sketch sent will illustrate the thrust bearing which is O. K. I have also shown the flap at the end of shaft so ones hand can be inserted to feel the shaft. There is a little ledge over top of it to keep dust off. You will notice I have diminished the rabbit in the recesses, also added recesses up nearly to the end as we had trouble here from rabbit spinning loose. I think you better not put in the recesses in housings B 123 why not make them plain face. Better make the guiding key of housing and girder reversed, have the key on the girder and the recess in the housing and increase width to five inches. In taking out a shell use a block, the outer surface which is the same diameter as shell and bored same size as shaft, then when you are drawing out shell keep shoving in the block, the shaft will then rest on the block when shell is en-

#5 W. S.

tirely removed. The block you might say is the lower half of a split bearing, I think if it is 10 inches long it will be sufficient.

You should use the oil screen cup we use on the giants. Its O. K. with the change we made notwithstanding that we are to use a wiped lead joint in the iron pipe system things will get in the oil and its a very serious thing to have oil ducts stopped in a giant roll, they are not easily handled and the whole plant and mine shuts down until they go, hence we should use everything that will insure continuous operation. There are so many miserable little things that cut half the time off from a days run. The shells should go in rather snug and therefore sometimes rust or stick badly so I think the bolts drawing them out should be increased from one inch to  $1\frac{1}{2}$  to  $1\frac{3}{4}$  inches. You will notice I have increased the number of recesses to hold the babbit. There is a tendency to spin the babbit between the recesses.

Regarding the babbit, I think you better use the babbit we used on giants at Edison. It was the third kind we tried and it worked O. K. it was special for the giant only. Reeves of Philadelphia made it. I can send a bar and you can have it analysed and made over there if desirable. Its a mean babbit to pour and must be done just so. We had so much trouble with it that we sent the shells to Reeves finally and had them babbitted, but I guess you can get it done there all right. Look out and do not bore out all the peined part as it then is spongy.

Stuffing Box B. 124. Put extension on and counterbore into housing. Be sure and make a good fillet in the keyway where plates go. The thrust on the plates are tremendous.

#6 W. S.

Use eight bolts to each plate. Separate the plates in the middle half an inch, this will give margin for casting. If there is any doubt you can make it  $3/4$ , using eight bolts gives wider and better teeth. Carry the bolts on outer and inner edges of plates clear across, this will strengthen them and will be good when plates are shifted.

Regarding Bolts B. 135. Why not make the 126 lot exactly the same, and the 18 lot the same then you will only have two lots of bolts. Its important that the manufacture follow your drawings as to ~~the~~ fillet on bolts. Our men twisted them off repeatedly even with a fillet until we cut their 5 ft. wrench off to 3 ft. Is there enough depth in hole to mandril to top good with the length of bolt shown. You remember that tall inspector who inspected giants and 36 Rolls. He was a lobster, he passed a lot of very bad work on the rolls from which we are now suffering and had to change. Good inspectors will be very important for you.

The depth of the slot in Bolts on B. 135 should be greater, three quarters of an inch deep. The tooth of the wrench wider at the end than at shank then it will not come out and scatter the jack tars on the winchless. Dent core the holes in the foot of the girder B 121. Hatchet the holes after they are in place. The sheet steel lock of the bolts holding plates on in 135 B. should be of such a width that their tops do not come flush with the bolt head, then the slot in the bolt head can be slightly over and thus prevent the lock piece from coming out.

I want to call your attention to a new point about couplings

#7 W. S.

of shafts. On the Chalk 3 High we have been troubled with heating of the bearing next engine house on the driving roll. It is caused by the fact that the big bolted coupling connecting the drive shaft with the 3 High shaft was not solidly secured to the small shaft and the side vibrations due to concussions pulled the coupling  $1/8$  inch towards the 3 High, then there was a big thrust against the thrust collar in small shaft bearing consequently heating. These couplings must be absolutely secured so they can not move endwise on the shaft, we have riveted ours. I think there should be a recess and bolted plate or forced on through, I am not sure these concussions wouldnt move a forced on coupling.

Neither Herter or myself quite understands the starting device for giants, something of that kind would be good. Another point, the conveyor under the 3 Highs (Chalk) going to blower house has its head pulley, motor, etc. up in ~~the~~ trusses, the bracing and stability is very bad and the jar and swaying is quite serious. We are now getting ready to do a lot of bracing. As your conveyors are in the trusses and as some long conveyors with heavy gravity pulls we also end in the trusses. You should have these stressses provided for by good bracing. There is not only side motions but up and down motions.

Have a good finish on the shaft of giant where it is bearing surface.

Yours truly,



*Letter #16*

March 30, 1903.

Wm. Simpkin, Esq.,  
London, England.

Dear Sir:

I have gone all over the 6 record books of cement runs and have got things pretty well worked out. I will send results of whole when I go north but thought I would send you briefly some conclusions.

- (1) Should be covered closed shed for say 40 cars in winter with enough steam coils keep ore from freezing in cars, also Journal oil from getting solid.
- (2) Steam pipes resting against hopper under Giants to give heat to iron of hopper to prevent ore freezing and blocking hopper.
- (3) Pinion and large gear into which pinion meshes are altogether too narrow; that has been one of the troubles on our conveyors which were heavily loaded, for instance 104. Top mixing belt, stress at circumference of 48 head drive pulley 1500 lbs., stress (allowing 80% efficiency for gears) on pinion about 1000 lbs. while the gear and pinion is more than ample for strength, the pressure per square inch is altogether too high even if gears were on dead pitch line but they never stay there and on a 25 H. P. conveyor I think length of pinion should be atleast 10 inches, not for strength but for diminution of pressure and there should be good oil casing. The large gear into which pinion meshes can be quite light. On your 50 H. P. conveyors pinion should be increased still further. These

W. S. #2.

conveyors with heavy pull out on large pulley is a peculiar combination with a train and motor, no friction must be abnormal.

- (4) Look out for heavy width gears on shaft of Roller feeds.
- (5) Look out for excessive pressure per square inch on all pinions.
- (6) 3 High Ropes. We are going to turn down couplings between 3 High and pulley drive to insert an inch plate. This permits having a rope always spliced and ready and the plate being taken out, rope can be got in. Four bolts in coupler will be enough as more cause delay.
- (7) Twice the number of side guide idlers wanted on bottom of conveyor belts, also these idlers ought to be two inches longer.
- (8) Freddy and I have made several flexible couplers for motors at our little Laboratory. I have one now that is perfect; will send you drawings from Cement Works.
- (9) You remember we had a sprocket wheel on 3 Highs to drive roller feed. We are going to utilize this to expedite putting in shear pins from which a great loss of time is had. 5 or 6 ft. away we put a worm wheel on shaft of which is a sprocket, by a pin in chain we connect quickly and by hand crank bring roll around so shear pin holes match. You will have to have something like this and this is simple.
- (10) Do not fail to have the blocks connecting top and bottom of housing of 3 High strong and rigid. The trouble we are having with our pulley drive bearings is due to the shock shifting of bearings in housing of driven roll., not a permanent movement so as to put shaft out of line but a concussive springing and this is transmitted to pulley shaft.
- (11) Stud bolts locked by small wire running though heads where bolts are around a circle is not sufficient; the wire bends by constant shock. Either a larger wire or something else for locking

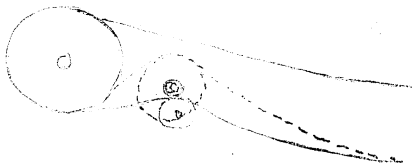
W. S. #3.

on concussive machinery is necessary, oil joints, etc. soon leak.

(12) Bolts with nuts and cotters on Rolls do not lock except use R. R. Car cotter with slot and cotter taper so it is driven in dead against head of nut and bent.

(13) What size (ie.) diameter and length pinions you going to use on Motors driving 3 Highs and other rolls. Remember shear of pins more than doubles pressure. Be sure have plenty dope in casing and put in a plug so oil man can tell when he has proper amount of oil in all oil casing. Thats something we didn't have at cement, consequently lots of our gears run dry and out bad, especially where pressure per square inch on teeth was high.

(14) On conveyor belts greater arc of contact on head drive pulleys are more efficient for bite or adhesion than longer slack we put on Idler thus:



The idler was ordinary diameter with heavier shaft and larger idler bearings. This did the business but the idler bearings gave lots of trouble. Make yours as in dotted lines and closer up to pulley to increase the arc of contact and bite, use say 3 inch shaft and regular self oiling chain bearing well secured on ways use 24 inch

W. S. #4.

or more wheel. With 25 ft. slack this should not slip on heavy loads.

(15) You can not make Gunny chambers too large, the floor should be double with thin sheet iron between the two floors. Ditto on top of chamber. Around bottom use wood, run about 10 or 12 inches high and stiff, to this the gunny can be secured. Cracks in floor at cement were cause of great trouble, also repairing of gunny at floor line as dirt collected at bottom outside and bulged gunny in. The board around bottom will stop this. Use stiff framing. The door we used was a failure. It was not self closing. The joint was no good, be sure and get a lap door always good and tight and powerfully self stiff closing. Hand fan should be special (ie.) capable of running continuously without heating. The supply of oil and oiling devices should be good. The connections should have one pole of a different kind of clamp than the other so men can only connect fan to run in the right direction. The fan should be made so it can only be put on shaft one way and pinned or secured so can by no possible means come off, also fan blades themselves all riveted, no screws. The whole fan should be clamped to pedestal, and balanced. Bergmann could make these. Have about 16 inch fan. If it is possible keep flexible coupling within gunny chamber.

(16) The shearing device on 3 Highs gets loose and shears, look out for this.

(17) Motors running small air compressor without a high speed fly wheel are a failure. At highest point of compression the amperes run up enormously. We are going to use pinion in two bearings and on one end pinion shaft put a fly wheel with shear pins, as this is high speed it need not be of large weight. With motor flexibly connected we hope to keep amperes reasonably even. Use the unloading

W. S. #5.

pressure device otherwise burn out motor.

(18) The width of Commutators on Bergmann motors are insufficient. They are narrowed to cheapen. It would be better to increase them fifty per cent, by employing say a 25 H. P. commutator on a 15 H. P. motor and so on. His break rigging is a complete failure where there is concussive jars. An Ocean Street car device best. There is no reason why motors driving gearing should not be fixed down once for all on base without a lot of adjustable things only required for belt driving. We had lots trouble with base bolts shaking loose. Remember this as a fact that the ordinary man does not set pinions on pitch line where the construction permits of adjustment not one motor pinion in ten were set right at cement, they were either not on pitch line or one edge did all the work, in addition the motor moved because bolts got loose. In my opinion all of the gearing should be framed together by cast iron assembled in the makers factory and doweled. Then the vibrating structure of the Mill would not be serious, otherwise there is bound to be continuous and never ending trouble.

(19) Raw hide washers on idlers are not the thing. They shrink. I am going to test for the right thing and will send you result.

(20) Could you have stayed longer I would have outlined the electrical scheme for operating plant (ie.) starting, stopping, etc., but when you are ready will write out whole scheme.

(21) Do not use any glass sights in motor bearings, they break from the jar. They can be a locked overflow plug. The oil system management we will establish will keep plenty oil in. Don't forget that long heavy chains are a necessity, also that one of the worst troubles we have on motors is that the oil follows the shaft through the wool and throws on commutator, etc. Its bad for commutator and

W. S. #4.

and had from loss of oil, as it makes it difficult for oil management to know when to fill. If this is stopped then it will be easy because when after a certain time all oil is withdrawn to be filtered and fresh oil put in and this would only be a question of date.

(22) Keep in mind when arranging motor and gunny chamber that sometimes the motor must be removed or the armature removed in case of cross or burn out and want room to get out of chamber without tearing it down as at cement and also way to get motor in and out building as it takes Sunday and all Sunday night to remove one under Rock Stock house. Were this part of the running mill it would be very serious.

(23) The springing and bending of the fan shafts in blower house because shaft too small is serious. Four inches is not too small diameter.

(24) More anon. Dont fail send design of bricking furnace with marked dimensions so men can work from drawings.

Yours truly,

Apr. 17, 1903.

Dunderland Iron Ore Co.,  
London, England.

Dear Sirs:

As a matter of record I beg to confirm the following cable sent to Mr. Dick this day. "Dick, Diocesis, London. Remember not single complete and final drawing Dunderland received or approved by me. Has anything been ordered? If so warn company of danger. Signed Edison."

Yours truly,

Apr. 17, 1903.

H. E. Dick, Esq.,  
London, England.

Dear Sir:

As per instructions from Mr. Edison I beg to confirm following cable sent you this day. "Dick, Diocesis, London. Remember not single complete and final drawing Dunderland received or approved by me. Has anything been ordered? If so warn company of danger. Signed Edison."

Yours truly,

Letter No. 17.

Wm. Simpkin, Esq.,  
London, England.

Dear Sir:

I am preparing for you full inspectors report and other records. Hope to send you soon as well as other things I have found wrong when taken apart. Will send as soon as ready. Several very bad things have developed which I did not know of and which is going to be very serious for us financially.

1st. The shafts of Blowers are one and fifteen sixteenths dia. and supported several feet apart, they have bent so bad that we shall take all apart and put in four inch shafts which is none too large for the distance. They not only have bent but the packing collars have cut them very deeply by the wobble.

2nd. The space for motors was so small that gunny chambers were no good, as they coul't be made any larger than the motors, result was that they worked in thick dust. The dust burnt in Commutators and the later are worn out and motors wrecked. There was such a terrible congestion and lack of any space that nothing could be practically done to save them. I am compelled to use a sprocket and put motors between roller feed and blowers, this permits all the motors being in one long continuous gunny chamber with side door so motor can be removed and taken between the dust bins and around the back of same.

*Received in letter  
of May 2-1903*

Apr. 18, 1903.

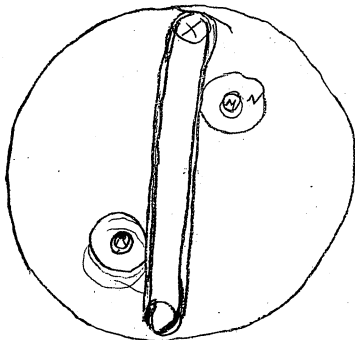


#2 W. S.

3rd. All the pinions and of course all the gears of drives on Conveyors are too small. They are ample for strength but the pressure per square inch is such that the heavy loaded conveyors have teeth worn one third the way through, consequently the vibration got so great that towards end of run the brushes could not be kept in the Commutator. The jumping of the brushes produce sparks and these heated commutator so that the maximum capacity of the 25 H.P. motors got reduced to twelve and then they had shut parts mill down to coal. On top of Rock Stock House the shaking of the structure was terrible and they had got out plans to belt down to a motor at the earth. I put in wider gears with pinion between bearings, put in new flexible couplings and we have been running mixing belt for several days. The motor is loaded to full capacity, it has neither spark or jar and the structure only receives a small jar from the wear on the other pinion and this would go out if it had been wider.

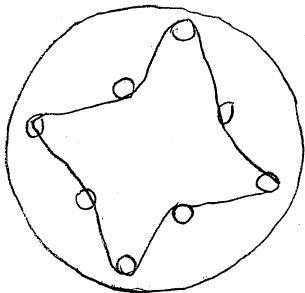
How long before you will send me drawings so I can put on the final O. K. Hav'nt received a single one that is final as yet. Are you sure that you have enough men in your draughting department, I fear you are going to get into a hole before long. It may be possible that the motors on the 3 High and Crushing plant rolls will need flexibles between gearing and shafting to prevent sharp vibration waves dancing the brushes. We have tried several flexibles on our smaller motors and have one that works perfect. It works so perfect we are making one for the third 36 inch Roll. On motors it is made thus:

#3 W. S.



Sixteen diameter, inch quarter pin "X". Wheel "N" is two half inches. Pin "M" inch, quarter. The belt is double and stretched all around edges by harness maker, the width on 25 H. P. is two and half inches. The disks are turned all over and balanced. When shafts out of true the wheels run up and down belt and hence, the easier they run up and down the less does the vibration wave go to motor; with the one now generally used there is considerable vibration transmitted and it is very unsatisfactory. The following is generally used in this country. It does not slide easy enough.

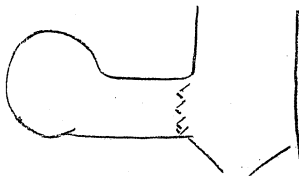
#4 W. S.



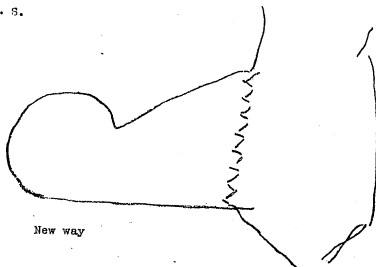
I have Barnes here experimenting on gunny chambers and we will soon be ready to give you full data.

Could you arrange blowers so there is a greater height for baffle plates; it would greatly improve them.

Old way



#5 W. S.



New way

There is a great difficulty in making a motor pinion and gear casing and bearings so oil in casing will oil bearings. Look out for this.

We are changing exhaustor from top of Dryer to Earth on concrete across the incline and running a downcomer pipe from top dryer to exhaust , putting in a cyclone dust catcher and by use of a 12 inch screw at bottom clean out dust catcher at intervals and depositing it on 102 conveyer. The congestion, heat and vibration are loud at the top of dryer.

We have trouble with bottom belts of conveyors running to one side, also getting under edge of side chilled idlers and ripping off the rubber the whole length of the belt. The idlers should extend way down close to base and also be higher and be every 50 ft. apart on bottom or return side. The top we have very little trouble with.

Yours truly,

*W. S. W.*

*Admitted in  
letter May 5-1903*

Apr. 23, 1903.

William Simpkin, Esq.,  
London, England.

Dear Sir:

Will you kindly let me know if you have received all of  
the following letters from me.

Letter No. <del>1</del>	August 12, 1902 ✓
" " 2	August 28, 1902 ✓
" No number	August 28, 1902 ✓
" No number	August 28, 1902 ✓
" No. 3	Sept. 2, 1902 ✓
" " 4	Sept. 5, 1902 ✓
" " 5	Sept. 5, 1902 ✓
" " 6	Sept. 6, 1902 ✓
" " 7	Sept. 11, 1902 ✓
" " 8	Sept. 15, 1902 ✓
" " 9	Sept. 22, 1902 ✓
" " 10	Sept. 27, 1902 ✓
" " 11	Oct. 5, 1902 ✓
" " 12	Oct. 13, 1902 ✓
" " 13	Nov. 3, 1902 ✓
" " 14	Nov. 10, 1902 ✓
" " 15	Nov. 10, 1902 ✓

#2 W. S.

Letter No. 15	Nov. 26, 1902✓
" " 16	March 30, 1903✓
" " 17	April 18, 1903

Yours truly,

*Phyllis C. Reed*

Registered

Acknowledged  
May 14, 1903

May 11, 1903.

Dunderland Iron Ore Co.,  
Fitzalan House, Arundel St.,  
London, W. C., England.

Dear Sirs:

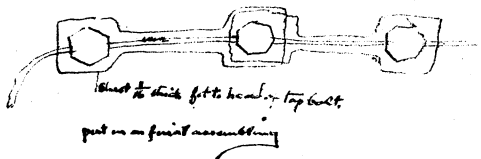
I have received complete drawings for the fine crushing rolls of the Dunderland Mill and approve of the same if alterations are made as to foundation and other details as per memorandum below. These alterations are the results of actual experience obtained on the same character of rolls at the Cement plant. Please acknowledge receipt of this letter. I would like the final drawings with alterations made for filing away for future reference.

## MEMORANDUM

B-137. There should not be more than one eighth of an inch between the plates, one quarter of an inch is too much. The edges of the plates, that is the last corrugation will cause edge to chip off, sometimes this chip will be several inches long and one to one and a half inch deep. We leave off the corrugation at the edge so the ore can not get hold of it to break the edge Thus:

#2 D. I. O. Co.

B-180. Tap bolts all shake loose, the wire does not lock them, it merely prevents screw from being lost. The only way to lock them is by fitting sheet iron links from head to head and then use the wire. Thus:



Regarding the nuts on bolts the same objection to the wire holds. The millions of sharp concussions received daily shakes every nut loose. Instead of a hole put in a slot extending down under head of nut, and drive a taper sheet cotter in and bend over. The taper should not be too great and the thickness of the steel considerable. This is quite a little job which can be done on final assembling, but is essential.

The oil xx drain at bottom should only have a pipe long enough to fasten the rubber pipe to, and the same should be locked. The long pipe breaks by momentum.

B-181. is all right.

B-182. Putting thrust collar on both ends necessitates precautions against canting of rolls which will produce a pinch. The precautions are that the ore shall be fed to the rolls evenly and that no segregation of the ore take place, that is to say that coarse ore will not go down the chute to rolls on one side and fine ore on the other. Otherwise 182 is all right.



#3 D. I. O. Co.

B-183. All right except locking with slot and taper cotter, which applies to the whole roll, except perhaps the large housing bolts at end which may be locked in another manner.

B-184. I am doubtful if we do not still need the key across the ways to hold the fixed shaft bearings in place, if it gets out of line with drive shaft there will be trouble. The concussion will strain tapped bolts and draw the reamed bolts. We have roll plate bolts on regular rolls drawn so much that we couldn't get them out. It is almost incredible but nevertheless true.

B-253. I have never yet used in a roll anything but a hammered iron shaft, and this under the advice of John Fritz of the Bethlehem Steel Co., I therefore advise hammered iron shafts, not that mild steel is not strong enough usually but on account of gradual crystallization under powerful and exceedingly minute concussive strains.  
main

Coupling on shaft will slip no matter if it forced on.

There should be a countersunk plate and bolts. We have had serious trouble with ours here and even after riveting it has started the riveting. It is difficult to see where this thrust comes from but it is there and is very powerful. Otherwise B-253 O. K.

B-254. All right. Look out for warping after finishing. Our ways here sprung one sixteenth of an inch, so roll had to be dismantled and replated to prevent bearings pinching on the ways.

B-255 all right.

B-256 all right.

#4 D. I. O. Co.

B-257. Grooves after machining should be polished.

Note. The standard outside the roll for internal oiling through long shaft should not be put on board floor but on steel/or foun-<sup>beam</sup> dations to prevent jar.

B-258. The shaft cover plate will leak oil without lead or ether packing.

B-259 all right.

B-260 all right.

B-261 all right.

B-262. Flexible coupling to motor.

B-263. Must be a good job or it will be sure to leak. We used drawing paper in joints.

B-264. We had to increase diameter of shear bush to two inches as concussions hammered the socket oblong when we had a smaller diameter and steel will be worse as it can flow. Should advise two inches as minimum with perfect fit. It is extremely essential. If you want to get a high average run each day that the shearing device should be made by the best tool maker obtainable, that the bushes should not be tempered too soft so edges will get rounded or too hard so they will crumble and the faces of the shear bushes should be perfectly flush with the plate and come perfectly together so that a perfect shearing device is had, then there will be no trouble.

#5 D. I. O. Co.

Are you satisfied that you have room enough between gear casing and shear to get the stub sheared bolt out easily. My experience is that the workman never realize how good a job this shear device must be and we then as a rule have to make it all over again.

The taper pin to bring shear plates together has proved a failure here, gets all battered up and on two occasions men forgot to take the pin out. We use a mark.

The shear pin clamp has also proved bad, the sharp edge of the slot causes it to act as a pipe tap. We have rounded the edges of slot but it is not ideal.

Regarding the gears. The strength is all right but the pressure is very heavy for a 200 H. P. rate the pressure is 2100 pounds for driving and double this for shearing. It is not a question of strength so much as wearing surfaces. If gears were theoretically perfect and we always got rolling friction, etc. it might be all right, but we do not get it. The speed and pressures here are very great and the wear will be proportionally great; another thing is that we have cast gears. The gears should have a minimum face of not less than sixteen inches and I believe eighteen inches would be much better. They may look strange but that is no reason they should not be used. The gear body could even be lightened, because its not a question of strength so much as wearing surface. On the spring rolls only a small part of the work or stress goes through the gears. Both rolls are practically driven direct through the medium of the ore. The gears preventing slip and consequently wear on the plates, and in the case of the regular rolls without springs, the gears do not transmit one quarter of the stress besides require very much less power, but on the fine grinding rolls the whole of a great power goes wholly through the gears, hence the gears should

#6 D. I. O. Co.

be all out of proportion to the gears above mentioned. You can make no mistake by using an 18 inch gear and in my opinion make a serious one by using 12 inch.

The jar of these gears makes it absolutely imperative that a flexible be interpolated between the motor and the drive, otherwise the jump of the brushes and sparking will be prohibitory.

B-265. I recommend the use of a regular engine piston and snap rings. The relief hole at tail end should be reduced to half inch. Provide a steam pipe in contact with cylinder to prevent freezing in the winter.

B-266 & 267. It is very desirable that ropes already spliced shall be in readiness, it is difficult for men to splice in mill and desirable that it be done outside and brought in, with the tightener rigging it will be difficult to do it without you make a change there. The position of your tightener does not permit of a clear separate room but I suppose you contemplate making the room so the air cylinders will be in motor room and the ways in roll room. It will not do to have ropes ran into motor room unprotected, as the air movement due to moving rope brings in lots of dust. You can not be too particular with this partition to keep out dust. We use matched pine, then cover with ten cent canvass and paint the canvass. Will not your rope strike foundation when starting up?

B-169. All right.

B-196. All right.

#7 D. I. O. Co.

C-116. These rolls should be made solid. There is nothing gained by hollowing out and there is a real danger from chipping off edge for the reason that sometimes the rolls will cant.

C-139 - C-140. Is decidedly objectionable. The concussive throw of the housing will not be less than one sixteenth of an inch and sometimes more. The gear bearings would not work at all. You should have cast iron girders atleast thirty six inches wide, well ribbed up in direction of throw and about two feet deep at the foundation, and somewhat bellied in middle. Have a foot on the girder where it rests on the foundation, say four feet wide and well secured by bolts to a very massive foundation. The greater the mass the better. If this is done the housing throw may be reduced down perhaps to one sixty fourth of an inch and your gear bearings will work all right. No one can realize what these throws are until he sees the rolls doing work.

C-141. All right.

C-142. All right, except as to width.

C-143. Forced coupling uncertain advise recessed plate and bolts. Motor shaft have flexible.

C-144. All right.

R-175. All right, except that you may have trouble in getting out plate bolts. Handril will move. I advise pinning in addition.

R-186. All right.

Yours very truly

Thomas Edison

*Registered*

*all received per  
Mr Simpkins letter  
May 19-1903*

May 19, 1903.

William Simpkin, Esq.,  
Fitzalan House, Arundel St.,  
London, W. C.,

Dear Sir:

I beg to enclose you herewith copies of letters as follows:

Letter no number	August 12, 1902.	Letter No. 9	Sept. 22, 1902.
" No. 2	August 28, 1902.	" " 10	Sept. 27, 1902.
" no number	August 28, 1902.	" " 11	Oct. 6, 1902.
" no number	August 28, 1902.	" " 12	Oct. 13, 1902.
" No. 3	Sept. 2, 1902.	" " 13	Nov. 3, 1902.
" " 4	Sept. 5, 1902.	" " 14	Nov. 10, 1902.
" " 5	Sept. 5, 1902.	" " 15	Nov. 10, 1902.
" " 6	Sept. 6, 1902.	" " 15	Nov. 26, 1902.
" " 7	Sept. 11, 1902.	" " 16	March 30, 1903.
" " 8	Sept. 15, 1902.		

Kindly acknowledge receipt of the above and oblige,

Yours truly,

*1903*

*1903*

*Registered*

COPY.

London, W. G., 13th Dec. 1905.

Simpkins. A. & Co.  
 Agents for the Magnetite Magnets.

Mr. Thomas A. Edison,  
 Orange,  
 New Jersey, U. S. A.

Dear Mr. Edison,

As you are aware, no patents have been taken out by you on the particular form of construction &c., of the magnetite magnets. Now that Mr. Ballentine is with us we have been talking the matter over very carefully with our Patent Agent, who is of opinion that we can make certain claims on the magnetite magnets sufficient to form a patent specification. In the circumstances we have thought it advisable to go ahead in the matter, and as soon as the patent claims are reduced to specification form we propose filing them in England and abroad. This, of course, is entirely subject to your approval, but it seems that we cannot possibly do any harm by endeavoring to strengthen our position as regards the patents of our magnets, especially in Norway, and we think that you will acquiesce in this view. The Secretary will be writing you an official letter putting the matter in order, as, of course, your sanction is required before we can do anything.

Hoping you are in best health,

Yours truly,

Edison Ore Milling Syndicate, Limited

P. H. Pollen,

Managing Director.

*Registered*

July 3, 1903.

Edison Ore Milling Syndicate, Ltd.,  
London, England.

Dear Sirs:

Your favor of the 19th ult. came duly to hand, and in  
reply I beg to state that I have sent a note to me Simpkin in regard  
to same.

Yours truly,

Copy enclosed.



*Registered*  
*Acknowledged*  
*Oct. 26, 1903*

Letter No. 21.

William Simpkin, Esq.,  
London, England.

Oct. 12, 1903.

Dear Sir:

The following is my notes on drawings sent by you.

C.-105 O. K.

C.-106 O. K.

C.-114 O. K.

C.-131 O. K.

B.-121 O. K.

B.-122 O. K.

B.-123 O. K.

B.-124 O. K.

B.-125 O. K.

B.-131 O. K.

B.-132 O. K.

B.-133 O. K.

B.-134 O. K.

B.-135 O. K.

B.153 O. K.

B.-162 O. K.

B.-216 O. K.

O15. This hydraulic may be too light.

B.342. Think this flooring too weak. All the big pieces are lifted

#2 W. S.

up on the teeth and top of dipper and dropped into the skips, sometimes they drop 3 ft. or more. Pieces weighing 10 to 15 tons do not give a gentle tap. The strain due to impact is terrible and it takes strong cars to stand it. We had at Edison, cars with outside stringers, 6 x 10, inside 4 x 12, the top was the same. Cement Co's. car is stronger, both are entirely too weak for 6 ton skips, therefore you can judge what B-342 will be. Our axles are 3 1/2 and are entirely too light and you will have twice the load and four times the stress from impact, due to dropping big chunks from the dipper top. Don't forget the extra pieces of timber on top of car above the regular floor to guide the skip on each side of it. Rear end of skip wants six one inch holes to permit water to run out. Otherwise skip O. K.

C-135. O. K. All bolts on the cheek will get loose if not perfectly cottered close to nut.

C-136. Hopper door should have plate inside to keep mud from coming on joint, see sketch No. 1, otherwise O. K.

C-137. My impression is that on the first five foot roll, I advised steel beatings for hopper, as the chunks are large and the pounding is terrible. The roll throws the chunks out of dead line. You better stiffen. The other five foot rolls will be O. K. in this respect, except that your wear plates will have to be renewed often and you should contemplate the placing of the wrought iron with chilled ends.

C-148. O. K.

B-269. What kind of a rigging are you going to use to permit one man to raise roll doors. We use hand windlars and ratchet; this makes it easy for inspecting plates, which should be twice a week.

#5 W. S.

B.-269. Is the arrangement on the first five roll for removing hopper heavy enough? I think dirt will get in and disturb your trolley. Dont you think it should be covered.

There will be a lot of spill of ore from open place under the shaft, I can not say if Randerland ore will give enough to be a serious trouble, but you better be prepared for trouble. I also think that on the first five foot rolls, that the bottom edges of the hopper underneath rolls, having no support will be pounded out of shape the first days run. Cant you manage to strengthen the edges, the more the better.

B. 270. I think hopper under 3rd 5 ft. is rather unstable, as you have two chutes hung to it, one to the 4th set, the other to the 5th set. You will certainly have trouble here.

B. 289. The bottom of this hopper is not backed up enough. At Edison under our four foot rolls we had one inch plate backed up by three feet of solid timber and it bent it so bad after one month's run, that ore wouldnt run out of hopper, the cavity filled and made a non slipping surface. We kept things going by renewing plates. Now this was not under Giants. The Giants at Cement are smaller than at Edison and have smaller chunks, yet we have a thick steel casting for bottom. With your Giant the chunks will be very much larger than at Edison and owing to the greater weight of the ore from high quality and the great fall of 26 feet, the great speed, due to the combined effect the roll and gravity the concussions will be gigantic, over an area of 2 or 3 ft. from the center line and the backing you have would last no time at all. On the other hand if the mill management is well drilled and taught that the hopper must never be run so empty, that the ore will strike the steel plate but always the ore you will have no trouble. It is for you to judge if they can be

#4 W. S.

trusted to do this. Something is wrong with the agitating roll of the roller feed mechanism. Can not understand it, seems to be down too far, cant understand big gap above roll, please send more details of the roller feed, as this is very important to have this just right, otherwise you will have bridging of ore in the hopper and this is fatal to your daily capacity being kept up. I want details also of spur gear and drive. The hopper chute above roller feed and in which agitating roll is, seems to be unstably secured. How can men get in with crows to break up an ore arch should it occur, as it does often.

B.-290. See 289 B.

B.-291. Ditto.

B.292. Think there should be a removable wear plate on sides of roller feed as the wear here is very considerable and it will be expensive to throw away the whole side because a small section is worn, chilled iron would be the thing.

B.293. See notes on 289 B.

B.291. " " on 289 B.

B. 293 See previous notes.

B. 297. Ditto.

B. 299. The wear on the chute from roller feed to 1st. 5 ft. roll will be very great at the point where it starts to narrow and all the way along the incline. The wear will be so severe that nothing but chilled iron will be satisfactory.

B. 300. See previous remarks.

B. 301. "

B. 304. See remarks B. 289.

B. 305. O. K.

#6 W. S.

B. 306. See remarks on B. 269

I fear that Dunderland ore will soon cut out all the chutes, and so rapidly that you must contemplate renewing the wrought iron plates with chilled plates, even the chalk is cutting the bottom out of our chutes at Cement Works where ore goes from S. dumps to the blowers and we are getting ready to replace by chilled plates. See sketch No. 2. If this is true of a trifling amount of a soft material, what will it be with heavy loads of cutting ore or heavy specific gravity as with Dunderland.

B. 307. See 306.

B. 308. Think cast iron cheek plates are not strong enough on lat 5 ft. rolls. There is a prying action of the big chunks between rolls and cheek plates, which will break almost anything except thick steel castings. You will note that in all my remarks that I fear your hopper arrangement on this roll. I am sure that it will not stand up.

B. 310. Cheek may stand the Racket but there will be no margin for safety. I do not like the instability of securing the cheek plate, the hopper on trolley is not a very stable thing to fasten it to. Pieces of ore get between tite of roll and the cheek plate and the cheek plate sometimes has to act as a crushing surface. You can imagine what strain it will be subjected to. Our chilled plates were always breaking on 36 inch rolls. They are breaking at Cement as well as wear.

B. 311. O. K.

B. 312. Shelf too light. The edge will wear rapidly. Where ore drops off shelf to chute below, it will wear about 1/8 of an inch per day, nothing but the deepest chilled iron wear plate, chilled deep will stand and this should be made easily renewable. Look out for

#6. W. S.

turning corners and dropping ore continuously on one spot, no one can realize its effect when enormous quantities are handled.

B. 313. See 312 B. Gate slides of this kind never work, ore gets in and sledge hammers will not budge them. They work on coal because you can crush that, as the space above the pushed in gate will fill up with ore, there will be about  $3/4$  of a ton pressing on the gate and sometimes the gate must be moved quick. There is a wedging action of the ore on gate at the slot, due to pressure and pieces dig in plate and lock it, then comes the sledge hammer. Something like fig. 3 will have to be used; this is used at Cement Works on 3rd 36 Roll chute.

B. 314. Cant tell how this delivery will work without section at tail pulley of belt is sent; its a ticklish operation to deliver 400 tons an hour on a belt and requires a great amount of experience. This branch of the business should be fully detailed and submitted for criticism or it will cause a great amount of delay, trouble and expense.

B. 316. I do not approve of the hopper on the giants at all. It should be made of steel castings, like on the Giant at Cement Works, but twice as heavy. In my opinion the hopper shown would not last for one days crushing. At Edison we had hopper  $2, 1/2$  inch steel castings and ribbed every 12 inches with ribs  $2, 1/2$  thick and 6 deep. The thrust on the end plates of the hopper was taken on the side plates and not on the bolts but at Cement works the thrust of end plates are taken on the  $1, 1/2$  inch bolts and they are constantly breaking. Your concussion will be 3 or 4 times what we had at Edison. Chilled plates would not stand at all and cant be used; ~~if~~ chilled plates are going to be put in, I cant see how you are going to take them out without taking the hopper to pieces. There is no bracings

#7. W. S.

to hold hopper latterly, except at foot, and against beams. You know we have four rods 5 inches diameter at Cement Works. You have'nt got the roller feed above giants right, a six foot chunk will give a trajectory landing it on top of the roll and end of hopper, which is very bad. I explained this once before to you. The mill at Edison was shut down 3 weeks and we lost about tenthousand dollars because we didnt have this right. If mistakes are made on giant, it will delay the starting of the mill for months and the cost would be enormous for general expenses, to say nothing as to the cost of any specific change. Your feed roll is too far in. There is so much wrong about these rolls that you better redesign the hopper and lay out, following the experience gained at Edison and Cement and send corrected drawing, and in this connection stick to old John Fritz's rule of "making lots of mistakes in getting everything too heavy". Remember static loads and concussive loads are fearfully and wonderfully different as I know to my sorrow. There is nothing on the drawings showing which roll is to have the slagger plates. They should be on roll farthest away from roller feed. Leave off the extension of the hopper above the top of the roller feed, then when ready to run, a shield only about 2 1/2 high and partly around can be put on, as its only to guard man cleaning skips and roller feed from being hit by stray rocks. At Cement our steel casting comes up level with the top of the roller feed. You have hopper extend over roller feed. How do you expect man to clean out skip and top of each skip, it couldn't be done and yet its absolutely necessary. If you want any drawings of rolls from Cement or Edison I will send them. See sketch of No. 4, showing trajectory which should be made for large chunks as the smaller stuff will take

#6 W. S.

care of itself. You do not send any details of bearings, Dump  
tables, Roll drive, etc. It is needless to go into further criticism  
of the giant roll arrangement. It would seem to me that you would  
have saved a great deal of time and money if you had sent a general  
sketch before making elaborate detail drawings.

B. 317. See previous notes.

B. 318. See previous notes.

B. 319. See previous notes.

B. 320. See previous notes.

A. 172. See note on B. 289. B. 292. B. 300.

A. 176. Would like details of girders that rolls set on. The plan  
of bracing. These girders have been criticized before, as they are  
shown without details my experience will not permit me to approve  
them.

A. 160. I think your monoliths are all right for strength and that  
as far as they are concerned we shall be all right. The pockets  
shown in .019 are not shown in A. 160, why is this?

You should send general and detail drawings of Dryer and  
connections as there may be changes in details that may turn out  
troublesome.

We have not received any corrected blue print of the 1st,  
2nd and 3rd 5 foot. rolls.

*Drawings copied on  
Page 148, 149 & 150*



*Registered*  
*Acknowledged*  
*Oct. 28/03*

Letter No. 22.  
 William Simpkin, Esq.,  
 London, England.

Dear Sir:

The following is my notes on drawings sent by you.  
 B. 330. Ballantine got Cement Co. blue print. The plates are about right but I may be that Dunderland ore will act different and you should have Ballantine set them right on a full sized experimental model, which I understand you have in London, so I will leave this drawing for you to approve; as to the details on drawing, the quarter inch plate is all right for stiffness, perhaps it would be well to cotter bolts, or when finally assembled put on washer nearly to head and turn over, as they are in a position where they will receive no attention.

Note. Please show in future drawings, in details, if you intend a cotter or other way of locking, this will save me lots of writing, as I always spot every nut that can get loose.

B. 322. I suppose you have determined on your full sized model blowers, that eight blades are better than six, but if you have not, would it not be better to stick to six as we know this works and while there seems to be no reason why eight would not be better, I wouldn't change without I absolutely knew from experiment that it was better. I have been caught too many times on these self evident propositions to make changes. The increase in diameter from 5 to

#2 W. S.

6 ft. I suppose you have tried. I approve of these changes providing you have tried the experiment on full sized model and found them all right with the ore itself. I note that in your letter of May 2nd, No. 22, you state you will make the shaft three and fifteen sixteenths diameter as I requested, whereas in B. 322, it is only two and fifteen sixteenths. In view of our troubles with shaft at Cement, I can not approve of making the shaft any lighter than three and fifteen sixteenths in diameter and its none too large at that. I want to call your attention particularly to the fact that the fans should be balanced on the shaft. Ours at the Cement were not, hence our shafts are bent and bearings are cutting; the whole thing a source of infinite trouble and expense.

A. 179. Would like assembled drawing of blower with baffle plates, roller feed and everything complete, then I can make a more intelligent criticism, its a little blind now with drawings sent. Increasing the casing sheet from 1/16th to one eighth is an improvement. The spiral casing for fan wheel dont look to me as if it was just right, I mean the sweep.

Would like a blue print of the bearings you intend using on fan shafts and how you are going to insure alignment of so long a shaft on such a structure as you will have. What is the wooden door for in the lower left hand corner. Where is the lattice openings in bottom with spout to let dust accumulating in fan bottom down into main chute. I suppose you intend doing away with the return air flues from top of dust bins, using free air from mill, getting rid of the air blown in by some means unknown to me, if this is correct I do not approve of it. I know that it will not be a success and you and the company must assume all responsibility for any change made from the plan at the Cement Works. As far as I can

#3 W. S.

understand the general plan of the blower building you intend exhausting from all the chambers by a long duct, if you put an exhauster at one end or even at both ends, suction necessary to draw the air out of the chambers will have to be so great that the first second and third chambers will have a draught strong enough to suck the ore over. I am sorry you have departed from an actual successful working blower house and go in for changes on the most ticklish operation in the plant, perhaps I am wrong in my deductions, but the plans submitted are not clear, so I can't tell <sup>7</sup>properly what is intended.

A. 178. See 179.

Should you and the company decide to go into the change in the blower house methods, you better insure yourself against a failure by so designing the layout that in case it did fail you could put in the return flues which in my opinion you will have to do.

B. 217 O. K.

B. 218 O. K.

B. 219 O. K.

B. 220 O. K.

B. 221 O. K.

B. 222 O. K.

B. 223 O. K.

B. 224 O. K., except, don't understand bottom "H" shaft, what is this shaft for and why so small a diameter compared with the others. Want blue prints of all idler bearings. Also side idlers.

Note. The side idlers at Cement are all being changed as the L. rubber catches top and bottom, see sketch No. 1, attached herewith.

B. 225. I note tall pulley shaft does not have any thrust collars

#4 W. S.

in bearings. How do you take lateral movements?

Note. Want blue prints of all bearings.

B. 226. Note same as B. 225 on first three shafts. The three other shafts have thrust in bearings.

B. 235. O. K.

B. 240. Have no arrangement of inside of this house, so can not tell anything about it.

How as C. 22 1/2

*Copy of drawing on  
Page 151*

Registered

Oct. 12, 1903.

S. H. Pollen, Esq.,  
Sec. Dunderland Iron Ore Co.,  
London, England.

Dear Sir:

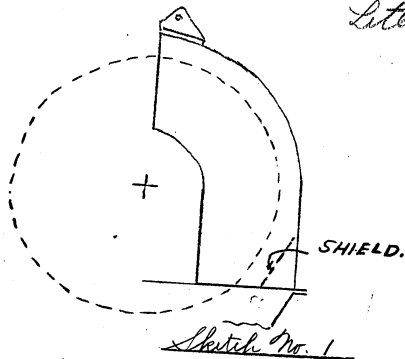
Your letter of Sept. 29th, 1903 received. So far all drawings sent by Mr. Simpkin for approval during the past year have been promptly gone over and examined and results communicated to your company. The first letter sent you was dated May 11, 1903 and the second letter May 18th, 1903. One set of blue prints relating to Giant Roll has been mislaid.

The lot of drawings here, which were received in Sept. from Mr. Simpkin are being studied by me. A part of the drawings have been studied and I forward a copy for record with your company at the same time as I forward the letter to Mr. Simpkin. If you will go over the letters you will see that only a few things have been finally approved and what will be finally approved will be sent your company for record and will be entirely based on the results of actual experience without any theory, and you can depend upon a prompt action on my part on receipt of drawings. It is to Mr. Simpkin that you must look for changes that I can finally approve.

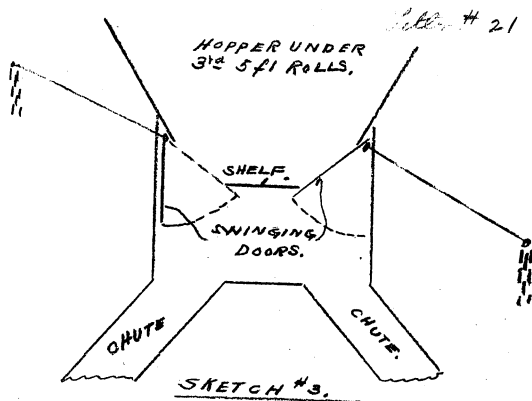
Yours truly,

*Copies of letters  
# 21 & 22 with  
Sketches enclosed*

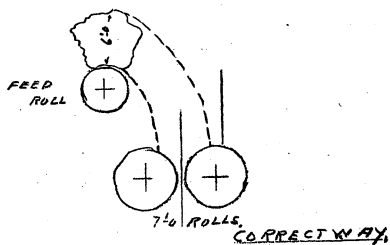
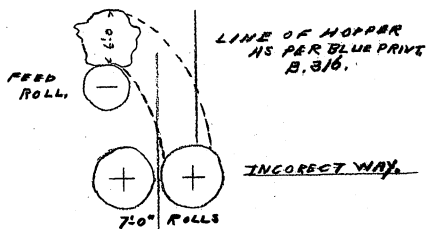
Letter # 21



# 2



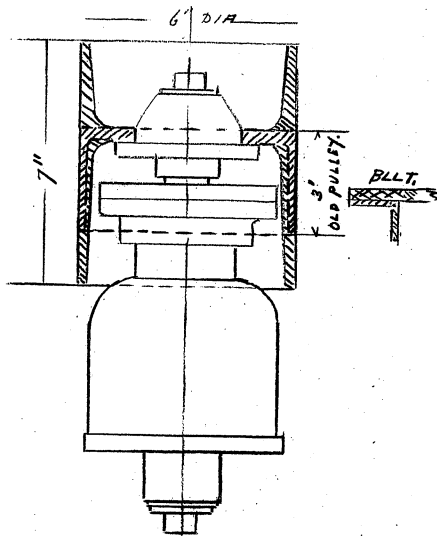
Letter # 21



SKETCH # 4.



Letter # 22

SKETCH #1CHANGE IN LENGTH OF SIDE IDLER  
PULLEY.

*Registered*  
*Acknowledged*  
*Nov. 24, 1903*

Letter No. 23.

Nov. 11, 1903.

William Simpkin, Esq.,  
London, England.

Dear Sir:

O66. I do not believe in using two motors and two sets gearing for your heavy conveyors. One large motor with 25% more power than you will ever need with very liberal width of gearing is what I advise from the experience we have so far. You can use a slow speed motor, say 450 R. P. M. Advise 24 inch <sup>on</sup> gear/head pulley and 14 to 16 inch for second. You will make no mistake if you use very heavy shafts. Flexibles are absolutely necessary with bearings on each side of pinion. Our flexible works perfect. You spoke about a flexible which catches and drives without slack. We find this a disadvantage by the slack we have; when we are shut down we can turn motor 1/2 revolution, fix brushes, clean commutator and feel for bind. On our starting up system the motor starts slowly. Our gunny chamber of 109, with 50 H. P. 18 x 12 is just right and temperature is kept within <sup>20</sup> degrees of outside. We were compelled to use three thicknesses of gunny for inner walls and one for outside to keep leaks down. With no dust of float we now have no trouble with brush sparking or glazing of fused dust. We have five inspectors, each man has a certain number of motors which he visits four times daily. He inspects for oil leaks, dust leaks, rubs the surface of commutator a little with crocus cloth, sees brushes O. K., nuts all tight and notes the temperature of thermometer.

#2 W. S.

The result is our motor system is as near perfection as anything can be and we have no trouble except where there is jar. Now I want to impress upon your mind the serious character of sharp jars and shaking on motors. Where we have jars on motors we can not keep the brushes from sparking as the jar is transmitted to them; the result is constant roughening of commutator and increase of spark and change of brushes. Even the motors driving rolls should have flexibles. I spoke to you about this once before.

The big 1,1/4 inch wire rope flexible used as wobbler on 3rd 36 Rolls is all right. You can make them to drive any amount of power. If you use outside air and draw it in by fan, and force out through gunny, look out that the air outside will not be very dusty on certain direction of the wind. Cement works got knocked out in two or three places where they did this and had to go back to the old way. Look out and have a very large shaft and ample bearings, as well as many spiders on the big idler that serves to increase arc of contact of head pulley on conveyors. We have had serious trouble here until we made them strong.

F. 246. Your upright side idler should be one inch longer to meet every contingency. I am going over balance of drawings sent and will finish shortly.

Yours truly,

*W. S. R. R.*

*Registered*  
*Acknowledged*  
*Nov. 24/03*

Letter No. 24.

Nov. 16, 1903.

William Simpkin, Esq.,  
 London, England.

Dear Sir:

Your No. 37 received. You must have misunderstood me regarding the hoppers for the Giant roll and when I suggested the use of sheet steel for hoppers of rolls in place of cast steel, it only applied to the finer crushing rolls. As hoppers on Giant and Intermediate Rolls were reconstructed three times, each one stronger than the other at a cost to me for works, delays, etc. of over \$30,000, the requirements as to strength would not likely slip my memory: I refer to hoppers above top of rolls and sides. As to the hopper below Giants for storage, that can be made of sheet steel and we agreed on that in Florida, but the bottom I told you would have to be strong. You will not be able to depend upon the men keeping ore in the bottom to cushion below, no matter how intelligent they are. Any mill constructed which has to depend upon the intelligence of the men will be a big failure. Fix things so if neglect comes nothing is ruined.

I will send you this week sketch of Giant Hopper at Edison and rough sketch of my idea of hopper for your giant. I refer to top and sides and also storage hopper, feed rolls, etc.

If you get no reply from a drawing do not take it for granted that it is all right. You say that upper part of hopper of

#2 W. S.

Giant at Stewartville is of wood, this is a mistake its of steel; the Giant at Edison has wood and its no good, build of steel.

Speed of feed roll above Giants has very little to do with the trajectory of large pieces. Your experiment with small feed roll must have been done badly. A circle acts somewhat like an angle chute, from the time it starts to slide it moves down a circle and can not possibly fall any where near perpendicular; if it was wood and didn't slip it might, but if of iron and it slid, then it forms a large trajectory. You remark that, "however, you wish it and so it will be moved back." Its not a question of my wishing it, its a question of getting it right and my data is based on actual working.

C. 136. Dirt will get in between door and hopper on plan you show. The sketch we sent is best thing we have found. This sketch No. 1, Letter 21.

C. 137. I am sure first 5 ft. rolls should have cast steel for hopper. I think Manganese steel wear plates are good, providing they will give more wear for the money. I await sketch of gate slide. We have used every conceivable one and not one worked permanently.

Will send you chute sketches this week, bottom Dryer and last two rolls.

B. 316. I never remember suggesting chilled plates in upper hopper of Giants. You must have misunderstood me. We never had them at Edison or Cement und there is no need of them, as wear on cheek plates only commences when you get to finer rolls.

Please take my notes in the spirit they are intended. I am only sending you criticism based on experience in actual work, with such conservative changes that will tend to eliminate defects now met daily. If you could spend one month at Cement works, you

W. S. #3.

wouldn't need any of my letters. Our ropes last on Rolls from 26 hours to 240 hours, depending on state of the plates and evenness of feed; this is on crushing Cement 90% through 200 mesh, with less pressure for coarser crushing life will be longer. When roll plates chip off, load varies pressure and its severe on ropes.

B. 246. We never had this drawing before, see last letter in re making inch longer.

All drawings or parts approved by me finally are marked and with proper explanations, are finally filed with the Dunderland Iron Ore Co. and I will only be responsible for those things finally approved and filed with the Company, of which there has been two parcels already sent.

Yours truly,

Letter No. 28.

J. E. 16, 1904.

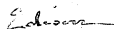
William Simpkin, Esq.,  
London, W. C.,  
England.

Dear Sir:

Replying to yours of the 31st ult., I beg to state that I go to Florida about the 25th of February, but will be busy from now on. You time your visits at a time when I am overwhelmed with work.

I do not understand your reference to fine grinding rolls, as you leave out all explanations. You will be interested to know that one of our 12 inch iron shafts on fine grinder snapped in two parts. We use removable plate and put on a new rope in 40 minutes, so do not understand your remark about not being able to do it.

Yours truly,



April 28, 1904.

William White, Esq.,  
75 Wallace St.,  
Orange, N. J.

Dear Sir:

I beg to enclose you herewith letter of introduction to  
Mr. Peter Weber of the Edison Phonograph Works.

Yours truly,

April 25, 1904.

Peter Weber, Esq.,  
Orange, N. J.

Dear Sir:

This will introduce to you Mr. William White who was em-  
ployed here in the office by me some time ago. He is desirous of  
obtaining a position in the Phonograph Works Shop and anything you  
can do for him will be very much appreciated, by,

Yours truly,

H. B. Oak,  
Letter to

Dear Sir:  
s/c 8/10  
forwarded to

Dear Sir:

I am  
late to make  
complete draw  
are making th  
etc. which wa

Underland Tr  
Titanian

Dear Sirs:

forwarded to



April 25, 1904.

H. E. Dick, Esq.,  
c/o Brown, Shipley & Co.  
125 Pall Mall, London.

Dear Sir:

I beg to enclose you herewith copy of a letter which I  
forwarded to Mr. Simpkin this day.

Yours truly,

*Thos A Edison*

April 25, 1904

Dundee Iron Ore Co.,  
Fitzalan House, Arundel St.,  
London, W. C., England.

Dear Sirs:

I beg to enclose you herewith copy of a letter which I  
forwarded to Mr. Simpkin this day.

Yours truly,

*Thos A Edison*

Letter No. 29.

April 25, 1904.

William Simpkin, Esq.,

c/o Standard Construction Corporation, Ltd.,  
London, England.

Dear Sir:

I do not understand your letter in which you fear it is too late to make changes in the 3 high Rolls. I have never approved the complete drawings of the Rolls, and your letter would imply that you are making them. How about the other drawings of Dryer, Conveyers, etc. which was to be sent for final approval?

Yours,

*Thomas Edison*

X

June 8, 1904.

Dunderland Iron Ore Co.,

Fittalan House, Arundel St.,

London, W. C., England.

Dear Sirs:

For the purpose of record I wish to state that I have never received final drawings of the three high fine crushing rolls and the major portion of the plant to be erected in Norway and the statement in the prospectus that I am to design the plant has not been carried out.

Yours truly,

*Thos. C. Edison*

*Registered*

H. E. Dick, Esq.,

June 18, 1904.

c/o Brown, Shipley & Co.,  
London, W., England.

Dear Sir:

As per request of Mr. Edison, I beg to enclose you herewith  
a copy of a letter sent to the Dunderland Iron Ore Co. June 8, 1904.  
Kindly acknowledge receipt of same, and greatly oblige,

Yours truly,

*A. H. Underhill*  
*Secretary**Registered*

Sir David Dale,

June 18, 1904.

c/o Edison Ore Milling Syndicate, Ltd.,  
London, W. C., England.

Dear Sir:

As per request of Mr. Edison, I beg to enclose you herewith  
a copy of a letter sent to the Dunderland Iron Ore Co., June 8, 1904.  
Kindly acknowledge receipt of same, and greatly oblige,

Yours truly,

*A. H. Underhill*  
*Secretary*

*Registered*

June 15, 1904.

Dunferland Iron Ore Co.,

London, W. C.,

England.

Dear Sirs:

I beg to enclose you herewith a copy of a letter which was sent you on June 8, 1904 and which I omitted to have registered at the time the original was forwarded.

Yours truly,

*A. Munroe*  
*Secretary*

*Registered*  
*Acknowledged*  
*Aug. 10/04*

July 28, 1904.

Mr. S. H. Pollen, Sec.,  
Dunderland Iron Ore Co.,  
London, W. C., England.

Dear Sir:

Replying to yours of the 19th inst., I beg to state that it would be useless to go to any trouble or expense from now on to send me drawings of machinery already contracted for. I suppose everything is closed up and I hope you will have a happy ending.

Yours truly,

*Thos A. Edison*

Copy.

Oct. 19, 1906

William Simpkin, Esq.,  
London, England.

Dear Sir:--

You will notice on new rolls that we have provision for Bath oiling- so far we have not made it go very well on account of leaking of oil. It saves a great amount of oil; however, we do not use the overflow pipe close up to shaft, but supply all the oil the bearing will take and let it drain away from casing. You will notice the new stuffing box. This principle has proved a great success. The old way the wood sagged away from shaft in the packing case and let dust in; with the new way this can't occur since the dust must filter through the wood which it can't do; the result is that on all bearings with this packing, we never have trouble with dust.

We also made the mandrel a considerable distance from the bearing; this prevents showers of sand and also helps us in getting plates on.

We start the rolls, i.e. back roll, with rope and windless which works O.K.

W.S.--2--Oct.19, 1906

Use our soft babbitt. We tried regular hard babbitt and had several pinches, because it wears down so slowly that it takes too long to get an oil bearing. When using the regular soft babbitt (of which you have the formula), we make the compression of springs one and one-quarter inches the first week; the next week we increase pressure to one and three-quarter inches; week following, two and one-quarter and week after, two and one-half, which is about the amount we regularly use.

We made great improvement in working of rolls by feeding with fine ore. This stopped jumping of rolls which was due to large pieces. So far the rolls have worked perfectly and give no trouble whatever. The power used ~~per barrel~~ is about double (per barrel) that of rope rolls, but output is greatly increased, because they never break down.

Yours truly,

Thos A Edison

*Personal signature*



November 19, 1906.

William Simpkin, Esq.,  
Dunderland Iron Ore Co.,  
Fitzalan House,  
Arundel Street, Strand,  
London, W. C. England.

Dear Sir:

Yours of Oct. 31st. received. If I remember right you have four rolls for fine crushing, which at 50 tons hourly, each 20 hours, would be 4000 tons daily. As you want more and do not want to load your belts up with returns, the only way to do it is to increase your pressure. The capacity goes up very much faster than the pressure; we carry 750 tons on our 36 belt, to and from the rolls. ~~4-7-3~~

The rope rolls would do about 16 to 18 tons hourly, 85 per cent through 200 mesh and about 65 tons 20/1000 diameter per hour.

If your present ore is anything like the 20 barrels of ore sent me you should crush 75 to 100 tons on your present roll. The only explanation I can make is that when you got into the ore it became very much harder.

We have one of our big rolls same as drawing sent you, run by a motor and belt, it runs all right. The best solution for you is to duplicate what work here so perfect, possibly driving with belt. We still run 200 revolutions per minute and carry all the pressure we can on the bearings; using all the oil the bearing will take and keeping thermometer in oil to note its temperature.

W. S. 2.

We pass 200 tons of ~~clinker~~ <sup>slag</sup> hourly through the rolls. The efficiency is only a question of ~~pressure~~ <sup>work of bearing</sup>. Your changed roll will not have enough bearing surface to ~~give~~ <sup>give</sup> you what you want, that's my opinion. Are you crushing 4000 tons daily?

Yours truly,

Thos. Edison

William Simpkin, Esq.,  
Fitzalan House, Arundel St.,  
London, W. C., England.

Dear Sir:

If you are having trouble about making enough fines, you should change the corrugations on plates to correspond to cement plates. The old rolls carried 200 tons per hour all right and the corrugations were O. K. for the finest crushing. The new rolls sent you show them.

The corrugations you have were adapted to the ore sent from Norway and was probably top ore and not hard, like what you say you now have.

Minimum corrugation give finest crushing,

Yours truly,



February 27, 1907.

William Simpkin, Esq.,  
Dunderland Iron Ore Co.,  
Fitzalan House, Arundel St.,  
London w.c. England.

Dear Sir:

In reply to your letter of the 30th. ult., I beg to state that Mr. Edison has gone to Florida and will not return until about the 15th. of April, when your letter will be placed before him for his attention.

Yours truly,

Secretary.

Dec. 14, 1907.

Wm. Simpkin, Esq.,  
 Edison Ore Milling Syndicate Ltd.,  
 Fitzalan House, Arundel Street,  
 London, W. C. England.

Dear Sir:

In reply to your letter of the 28th. ult., I beg to state that the United States Steel Corporation and others have big slag Cement Mills in this country. They are troubled with variable slags and sulphur. Our costs at works are lower than any other mill in this country.

Flour in cement is worse than useless; it is hydrated in the act of mixing. What is wanted in a cement where all is fine and a minimum flour, and not cement with a large amount of coarse, which takes a year to hydrate, and swell the already set concrete and a lot of unpalpable flour, that sets while you are mixing it.

There has never been a single instance, where our concrete has shown a single failure; which is not the case with the other companies.

Yours truly,

Edison

*We have supplied all the cement for Manhattan  
 now have contracts for New Subway*

E

Jan. 29, 1908.

Wm. Simpkin, Esq.,  
Fitzalan House,  
Arundel Street,  
London, w.c. England.

Dear Sir:

In reply to your letter of the 17th inst., I beg to state that your trouble is want of aeration. We have no trouble here. Our cement tests higher than any other. The flour is a disadvantage, as it forms a colloid right away, and weakens the cement.

Eighty five per cent through 200 with a minimum flour and well aerated, makes the strongest cement possible.

Yours truly,

**Edison Ore Milling Syndicate, Ltd., and Related Companies  
Experiments (1899-1900), Cat. 999**

This book covers the period November 1899-May 1900. It contains notes, drawings, calculations, and test reports relating primarily to experiments conducted by James B. Ballantine on ores. Most of the entries are in the hand of an unidentified author, but there is one page of notes and calculations by Edison pertaining to sight-feed experiments. Another note regarding the price and consumption of soda for briquettes bears the initials "T.A.E." Also included is a report entitled "Report of Cement Arch Test No. 3," along with notes concerning a "hematite machine" for Dunderland ore. Portions of the book are transcriptions of notes contained in N-99-11-29 (see "Notebooks by Edison" in the Notebook Series). The spine is stamped "Record" and is labeled "Experiments." The book contains 401 numbered pages; many pages are blank.

## Experiment on Norway Ore by Ballantine

Nov 27 99 Sample A contains 52.66 % of Fe (Shock)

Ground to 0.10 total mesh. 650 grains blown out by air 2 1/4 % as dust. The 650 granules had following percentage after running

Magnetite	0
Hematite	46%
Saltings	51%
Dust	2 1/4%

The above sample separates easily, there being no pieces of quartz with Magnetite sticking to it. Made assay for P. myself. got 0.15 sent sample to Mr. Smith to assay for Fe & P. - He reports 66.3 % Fe, 0.15 P. run over 7 times - 6 times to make fine & once run concentrate

Sample B. After runnings

Quenched to air		Dish
Magnetite	9%	
Hematite	46%	
Saltings	37 1/2%	
Dust	"	
Magnetite	3 1/2%	

This sample was now to separate than A. Had to run it over Machine (A) twice (B) six times to make concentrate. Then screen concentrate (3) three times to get magnetite with 6-10 x 15 sample for vol. & comp. record. 3 times to get stuff a little less Magnetite than Hematite. This was done with 1st sample.

In this run the collected stream had a partition board put in to cut the stream of Magnetite stuff. The last Magnetite was

low grade Magnetite. This was thrown out. Sample C. 33.9 % Fe (Shock) Cannot separate on Hematite Machine. Contains about 30% Magnetite

It's nearly all Hematite.  
Sample D. 30.53 % Fe (Shock) Contains 30.4 % Fe in Magnetite. Only separable on Belt 'III'

## Continued

Sample E. 26% Fe (Shock) 25% Fe in Magnetite (Ballantine) only separable on Belt 'II'

Sample F. 17% Fe in Magnetite. Tried this sample on Hematite machine but did not get any good results owing to magnetite. This is one of the bad samples & in practice I do not think it would pay to separate the Hematite owing to the Magnetite Magnetite. Took out for trouble here

Sample G. 44.60 % Fe (Shock) 43.11 % Fe in Magnetite

No Hematite in Magnetite

Sample H. 41.96 % Fe (Shock) 3 (Ballantine) got 36.2 % Fe in Magnetite. Very little Hematite. A. Magnetite

Sample I. 34.22 % Fe (Shock) 20.2 % of this iron is in Magnetite. Cannot separate Hematite this would make a loss of 10% in saltings. This sample may have been taken from the surface and is weathered out (it looks that way). The foregoing are from National Deposit.

The National deposits would give an average of 8% Fe in Magnetite. Saltings 27% Fe in Magnetite. Could be got with bar magnet. The 8% in Hematite could not be got owing to Magnetite Magnetite.

Sample J. 35.92 % Fe (Shock) This is one of the five samples for Hematite Machine as it only contained 1% Magnetite. Can make a splendid separation in 7 runs by making a good concentrate each time, cannot see any quartz in concentrate under microscope. Quenched to air. Contains 14.4 % Fe in Magnetite. Shock reports 32.39 % Fe total. One of the bad samples but seems to work pretty good. Could work it in practice OK.

Sample K. 34.52 % Fe (Shock) contains 14.3 % in Magnetite.

This and the last two samples are from the National Deposit and are OK for the Hematite Machine. Can be separated with 8 Magnetite running at the rate of 600 lbs. per hour for powder machine. This is done by blowing all of the stuff smaller than about .003 out by air. This contains very little iron. 6 runs make good saltings & concentrates. Run the concentrates over to get stuff that is more magnetite than Hematite & once to get stuff that is less magnetite. Will have to blow dust out in



## Experiments on Norway Ore. "Continued"

Norway mill to get machine to work well  
 Concentrate 18.3% Fe in Magnetite & so no good for  
 Neumatite Machine

Sample D Use all O.V. for Neumatite Machine and can be separated

" O. just rds with not more than (9) min. magnets at most

" R. in fact 8 runs to be all that is required! 6 runs to

" make concentrate with 5.5 volts & 1 amp. - and twice

" to take magnetites - one run with 20 lamps/ 67 volts

" U. 3.3 amp. to catch stuff that is a little less Magnetite

" X. Use Neumatite & over with 4.5 lamps/ 5.5 volts & 1 amp.

To catch stuff that is a little more Magnetite than Neumatite  
 Sample V Use from another Deposit & are difficult to separate  
 X Z. V. Contains 38.40% in Fe 17.2% of it being in  
 Magnetite - Z contains 39.83 in Fe 15.8% of it being  
 in Magnetite.

Now mixed up all of the samples in bags crushed and  
 returned to ore going to make Magnetite & Neumatite together  
 to send to London. - Took out Magnetite on belt machines in  
 7 runs. - I find that I have an enormous amount of  
 magnetites from the samples that contain about half  
 magnetite & half Neumatite. - Will have difficulty in making  
 a good concentrate I am afraid. - Both object of catching  
 strongly Magnetite Magnetites & get rid of, as they clog  
 the Neumatite Machine. - They are not magnetic enough  
 for belt machine & to magnetite for belt machine.

1st run was made with 5 lamps on board 4.47 volts 2.7 amp.

2nd run was to catch all the Magnetites or half grade  
 stuff between Magnetite & Neumatite. - Used deflecting  
 board to cut stream.

Next made 7 runs with 40 lamps 5.4 volts 3.88 amp

Now make good tailings. - Now the concentrate 3 times

with 40 lamps 5.4 volts 3.88 amp. The concentrate now

looks good. - Made assay for O. myself (short method)

got 63.4. - The Magnetite should go about 67% Fe

O. Hunk & the Neumatite in the Magnetite between 65

& 66% Fe. - Now find that Neumatite Magnetite

only must 63.94% Fe & 0.5% in London.

## "Continued"

Now mixed & crushed up all of samples sent in rock form  
 from Sunderland. Crushed to 0.09. - Took out Magnetite in

(7) seven runs on belt machine (#1 small bottle is a sample)

Took out more Magnetites on Neumatite Machine with

10 lamps (Sample bottle #2)

Made seven runs with 40 lamps 5.4 volts 3.88 amp.

1st Run took out 5.6%

2d " " " 5%

3d " " " 4.3%

4th " " " 3.9%

5th " " " 3%

6th " " " 2.2%

7th " " " 1%

Total 25%

Now concentrate in from three runs 4.5% Fe

#3 bottle is a sample #4 bottle is a sample of tailing  
 made in the same run.

Now 4.8% concentrate 3 times 4.5 lamps 5.5 volts

4 amp. - Assays 59% Fe. Bottle #5 is sample of

concentrate & #6 is sample of tailing. - Made other

3 runs with 2.5 lamps on, to catch portion of magnetites

less Magnetite than Neumatite. Took out tailing in

bottle #7 concentrate in bottle #8. Produced

concentrates to 0.07 & ran twice - concentrates in big

bottle is recalled

1st Run with 15 lamps 6.1 volts 2.8 amp.

2d " " 20 " 6.76 " 3.3 " \*

# Franklinite Experiments (Ballantine)

March 15, 1900

A mixture of Franklinite and Garnet ore sent from Franklin Furnace separated easily on Hematite machine. The Franklinite is a good deal more magnetic than the Norway ore and a perfect separation was made in 6 runs at rate of 600 lbs per hr.

1 <sup>st</sup> Run	with 8 lamps	on board	42.7 volts	2.2 amp
2 <sup>nd</sup>	"	" 15 "	"	61 " 2.8 "
3 <sup>rd</sup>	"	" 20 "	"	67.6 " 3.3 "
4 <sup>th</sup>	"	" 30 "	"	78 " 3.55 "
5 <sup>th</sup>	"	" 40 "	"	84 " 3.88 "
6 <sup>th</sup>	"	" 45 "	"	85 " 4 "

There is good deal of difference in the magnetic strength of the Franklinite - Had I used enough power in the first run to deflect say the stuff I took out in the 5<sup>th</sup> run, then the stuff that 10 & 15 lamps would deflect, would have blocked the magnet with 40 lamps, hence the reason for using a weak magnet first, getting stronger each run. The poles of magnet were  $1\frac{1}{4}$ " apart at the end of above mentioned six runs. The poles of magnet now put  $\frac{1}{2}$ " apart and the Garnet ore was taken out in the other six runs with 15 lamps 85 volts 4 Amp. The ore was crushed to 0.25 The Franklinite broke out of the baloches clean & is easy to separate. The Garnet is more difficult to deflect being a great deal less magnetic than Franklinite.

Muck Experiment (Continued) Mar 3 & 1900  
 Young to try & get another waterproofing agent other than  
 Residuum. Will try Tar & Sludge but also try Na<sub>2</sub>CO<sub>3</sub>  
 instead of NaHCO<sub>3</sub>.

Sample #1

100 Roam  
 100 Na<sub>2</sub>O  
 30 Res.  
 8 1/2 NaHCO<sub>3</sub>

Brickettes made from this muck stood 3 blows on wood  
 floor dropped 10 ft before baking. Baked 1 hour 12 min  
 450° stood 4 blows a brick left in stove another  
 hour & heat raised to 700° stood 41 blows when cold  
 Centre was black & showed no signs of burning  
 Another brick put in stove fire for our heat was quite  
 hard when taken out was not cracked but brown in color  
 and fairly strong. A brick put under water for 24 hours  
 absorbed 6% somewhat soft & broke with one blow

This brick I considered N. 2

#2

100 Roam  
 100 Na<sub>2</sub>O  
 30 Res.  
 9 NaHCO<sub>3</sub>

7 blows before baking

3 " hot

19 " cold

Will not stand muck test for 24 hours Na<sub>2</sub>CO<sub>3</sub> 6% water.

#3

100 Roam  
 100 Na<sub>2</sub>O  
 30 Res.  
 10 NaHCO<sub>3</sub>

7 Blows before baking

5 Blows hot

16 " cold

Stands water test same as #1 N. 2.

## Muck Experiments "Continued"

#4

100 Rain  
125  $H_2O$   
30 Res  
5% Na H.O.

Brigette made from above muck stood one drop  
before baking 5 blows hot 12 blows cold.  
Shades water test same as #1 N.Y.

#5

100 Rain  
125  $H_2O$   
30 Res  
9 Na H.O.

Brigette made from above muck stood 1 drop before  
baking - 6 blows hot 17 blows cold.  
Shades water test same as #1 N.Y.

#6

100 Rain  
125  $H_2O$   
30 Res  
10 Na H.O.

1 Drop before baking 4 blows hot - 7 blows cold.  
Will not stand water test at home - N.Y.

#7

100 Rain  
125 Water  
25 Res  
8 1/2 Na H.O.

1 Drop before baking 6 blows hot 12 blows cold.  
Water test same as #1

#8

100 Rain  
125  $H_2O$   
35 Res  
8 1/2 Na H.O.

1 Drop before baking 6 blows hot 15 blows cold.  
Water test same as #1 N.Y.

#9

100 Rain  
100  $H_2O$   
30 Res  
10 Na, Ca, O<sub>3</sub>

2 drops before baking 1 blow hot 25 blows cold

## Muck Experiments "Continued"

#9

After lying under water 24 hours absorbed 5% (seems to  
be hard compared w/ other bricks) exposed to frost 10" above  
3rd showed suddenly in chemical room 78° temp. stood 3  
blows afterwork. Work when hot otherwise a good brick

#10

100 Rain  
100  $H_2O$   
30 Res  
17 Na, Ca, O<sub>3</sub>

6 Drops before baking 2 blows hot 16 blows cold.  
Water freezing and thawing tests same as #9 2 blows  
afterwork.

#11

100 Rain  
100  $H_2O$   
30 Res  
14 Na, Ca, O<sub>3</sub>

5 Drops before baking 3 blows hot 3 blows cold.  
Water freezing & thawing tests same as #9 - 3 blows afterwork

#12

100 Rain  
125  $H_2O$   
30 Res  
10 Na, Ca, O<sub>3</sub>

1 Drop before baking 2 blows hot - 5 blows cold.  
Water freezing & thawing tests same as #9 - 3 blows afterwork

#13

100 Rain  
125  $H_2O$   
30 Res  
17 Na, Ca, O<sub>3</sub>

Absorbed 1.9% water in 24 hours after being exposed to frost  
& thawed. Same as other bricks - stood 5 blows afterwork  
stood 5 drops before baking 3 blows hot 16 blows cold.  
This is the best brick so far.

#14

100 Rain  
125  $H_2O$   
30 Res  
14 Na, Ca, O<sub>3</sub>

5 Drops before baking 2 blows hot 22 blows cold -  
Water freezing & thawing tests same as #13 stood 5 blows  
Forward.

## Mack Experiments 'Continued'

#14 afterward - This truck is weak when hot but seems to be good otherwise -

#15 100 Provis  
12.5 H<sub>2</sub>O  
2.5 Pres.  
14 Ka Co. O<sub>3</sub>

5 Drops before baking 3 blows hot 47 blows cold.

Water purges & thawing little same as #13

Good new blows afterwards

#16 100 Provis  
12.5 H<sub>2</sub>O  
3.5 Pres.  
14 Ka Co. O<sub>3</sub>

2 Drops before baking 5 blows hot 81 blows cold.  
Under water at 1000 absorbed 1.3% after being exposed to frost & thawed same as other trucks stood 15 hours. This is OK but truck I have ever made

#17 100 Provis  
12.5 H<sub>2</sub>O  
3.5 Pres.  
16 Ka Co. O<sub>3</sub>

Breaker N.I. too much soda.

#18 Same as #16 only two parts instead of Pres.  
Breaker are fair. Could be used as far as strength is concerned. Glazes 3 blows hot - Much would be N.I. in practice - Too change into Pitch in making up & makes much too thick. Might block up pipes & give no red of trouble. Cannot get more than 1.25 part N.I. to mix with much. This makes the much too thick - if say 200 parts would mix this might be OK

## 'Continued'

Have tried different samples of tar - all act same. N.I.

Good sample from Baltimore. N.I. worse than tar

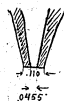
24 Baum's Praxidum sent from Standard Oil Co. OK using 35 parts instead of 35 as formerly

Have put some of #16 Blinds in boiler first before baking will stand to be washed with breaking but will not stand water test before baking

Have also tried to bake in 45 min. - Set a 3 blow brick in 45 minutes at 500° F. 4 blows at 550°

## Sight Feed Experiments

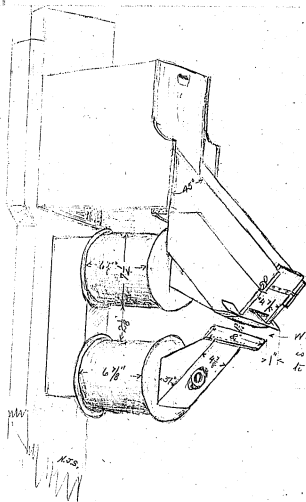
Number of Drops per Min.	Amount oil in gallon per min.
30	0.11107
61	0.18579
89.1	0.2791
116	0.3687
143.9	0.4898
179.5	0.6121
233.7	0.8352
370	1.4529
623	2.6137
Highest obtained Number of Drops: 668	2.8804
Smallest stream on increasing flow	0.26419
Smallest stream on decreasing flow	0.18209
For open valve at a height of oil over point of pipe 12 1/2"	0.526



(corresponding to 25.5%  
of ideal rate)

The above experiments were made with the  
sight feed glass used at Ogden Mills -  
Can used was a 3 gallon can. Mill oil  
was used. Temperature about 70 deg Fahr.

Magnetite Machine (Ballantyne) Apr 6th 1900



WOOD NOT SHOWN IN DRAWING  
is fitted in between poles  
to prevent concentration, getting  
back.

The above is a sketch of Magnetite Machine - a bar  $1\frac{3}{4}$ " wide by 8" long by  $\frac{1}{16}$ " thick was used for lower pole of Magnet. This bar had its edge beveled so as to form a sharp edge for arcs. A bar 8" long  $1\frac{1}{2}$ " wide x  $\frac{1}{16}$ " thick was used for top pole. The ore after coming down a  $45^\circ$  chute was deflected back by another board at  $45^\circ$  this board allowed ore to fall on bar forming top pole of magnet about  $\frac{1}{2}$ " from edge. The bars were loose & could be adjusted to any desired width of opening. Best results were obtained when they were  $1\frac{1}{8}$ " apart with a piece of wood filling the space between them. Magnetism held them in place when current was on. The object of using long bars for poles of Magnet was to prevent misfire - The edge of lower pole

Magnetite Machine "Continued"

is  $1\frac{1}{8}$ " back from edge of top pole.  $2\frac{1}{8}$ " when poles are  $1\frac{1}{8}$ " apart. This distance allowed a small misfire to form on both edges not enough to arc.

The feed used was  $4\frac{1}{8}$ " under & fed at rate of 600 lbs per hour of Sunderland Ore. A piece of wood with sharp edge was used for parting board.

Portland Cement  
Test on Screw Conveyor Jan'y 24 1900

Remarks

Tests were made with various gate openings & speeds -  
Effects of uniformity partially due to dampness of cement.  
Much produced at first feeding regularly -  
The power reading was taken when the latter end of each  
test when pump had become steady.  
Motor with belt off taken at HP

HP to run screw 16 R.P.M. =  $140 - 84 = 56$  }  
" " " 70 " " =  $133 - 84 = 49$  }

Torque by two fair lead on screw.  
270.

Phillips

1	2	3	4	5	6	7	8	9	10	
No.	R.	Lbs	Lbs	Elect	Elect	Torque	$\frac{1}{3}$	$\frac{4}{6}$	$\frac{4}{5}$	
of	P	per	per	HP-84	HP-144	from 6				
Run	M.	Rev.	Min.							
1	17	27	470	.68	.12	74	2.8	3920	691	
2	15	46	685	.68	.12	84	1.8	5710	1010	
3	15	43	650	.57	.01	7		65000	1140	
4	16	45	720	.67	.11	72	1.6	6550	1070	
5	16	52	833	.67	.11	72	1.4	7570	1240	
6										
7	14	107	1474	.77	.21	157	1.5	7020	1910	
8	48	56	2700	1.35	.79	173	3.1	3420	2000	
9	48	42	2000	1.83	1.27	278	6.6	1570	1090	
10	56	45	2550	1.83	1.27	238	5.3	2010	1390	
11	67	30	1800	1.16	.60	94	3.1	3000	1550	
12	72	50	3600	2.39	1.83	267	5.3	1970	1510	
13	56	85	5000	2.68	2.12	400	4.5	2360	1870	
14	40	41	1938	1.09	.53	140	3.4	3660	1780	



## Report of Brucutt Arch Test

No. 3

Arch material mixed and put in place on afternoon of Oct. 12<sup>th</sup> 1899.

Arch tested on Oct. 23<sup>rd</sup> at 24 hrs.

Sawed Arch material allowed to set 11 days.

Arch made in proportions of 1 of neat cement 2 of sand to 3 of sharp broken stone.

Two round steel bars 3/4" effective diameter with spaced ends 1" in diameter were used.

Weight equals 1473 lbs per ft area of 3/4" section 44179 sq. inches.

Two 1 ft lengths of 9" channel iron 1325 lbs per foot were used as weather plates for the bolts - nuts were set up with 18" wrench and force of 100 lbs, causing initial tension in the bolts of 5000 lbs.

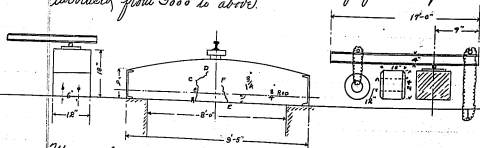
Arch span 8 ft. Over all dimensions 9 ft 5 inches.

Arch Brucutt was fresh Atlas Portland.

Arch 12" x 18" at greatest cross section, 9" x 12" at least.

Top of arch curved to radius of 14' 3".

Load of 31400 lbs concentrated at center of span was applied without breaking beam, loads being gradually increased from 5000 to above.



Material and weight of saws used.

2 tie rods at 1.473	14 lbs
2 foot chains at .43	86 lbs
2 channel iron washers at 1325	27 lbs
1 2" roller at 15	15 lbs

Continued

our 2" roller at pressure point 13 lbs	13 lbs
our 1 1/2" gas pipe at load point at 7 1/2	7 1/2 lbs
our machine steel pressure plate 6 3/4" x 7 1/4" x 3/8"	17 lbs
our weight supporting chain at 11 1/2	11 1/2 lbs
our smooth crawler roll (cast iron)	1325 lbs
our iron rail used as lever 17 ft long,	273 lbs

Load caused by weight of rail above.

$$W(X+X') = S \cdot \frac{X^2}{2} \cdot \frac{260.2}{12.8}$$

$$S(X+X') = S \cdot \frac{X^2}{2} \cdot \frac{260.2}{12.8}$$

$$S = 13.$$

$$S + S' = S \cdot \frac{260.2(96+9)}{9} = 305.5 = S$$

$$X = 96"$$

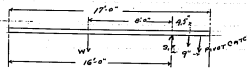
$$X_1 = 4.5"$$

$$X_2 = 9"$$

$$X_3 = 192"$$

$$\frac{12.8(192+4.5)}{192} = 13 = S_2$$

$$306.8 = S$$



Constant No. 1 = 3068

Dead load weight of flat plate = 17

roller No. 1 = 13

roller No. 2 = 15

chain = 86

Total 131 lbs = Constant # 2

Live load at time of stopping test.

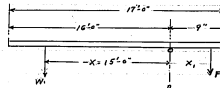
Total load acting

roller = 7.5

chain = 11.5

wt of rail 1325

Total 1344 lbs



$$W(X+X') = S \cdot \frac{X^2}{2}$$

$$1344(15 \times 12 + 9) = 25224$$

$$Constant No. 1 = 25224$$

$$No. 2 = 131$$

$$Total 25355$$

Load applied at intervals of 6" from 2' 6" to 16", at which the test was stopped.

Deflection taken from a wire stretched across arch.

Report of Bureau Arch test "Continued"

Under load of 9000 lbs, the deflection was 1-16"

18000 1/4

24000 1-2

31400 3/4

On removing load there was a permanent deflection of less than 1-16"

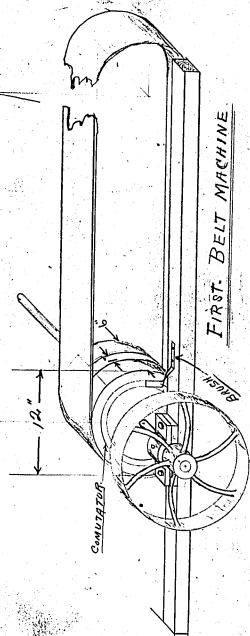
All cracks closed up under all loads under 22000, so that you could hardly find them.

Cracks appeared as per sketch:-

A. to B. at load of 3000, increased to C. by increasing load to 18000, to D. by increase to 24000, beyond which no perceptible increase was found.

Crack E to F appeared at a load between 18 and 20000. There were no cracks at supports.

of wires 65



FIRST BELT MACHINE

RESISTANCE 2.01MS  
LAMPS 40.  
AMP. 11.5.  
VOLTS 23.

BELT USED, MADE FROM CARRIAGE  
COVER CLOTH.

CORE-4"  
DIAM. 12"  
WIDE 6"  
OPENING-1"

FEET PER MIN. 600 ft  
ROUT-PUT 1400, 1450, 1460, 1470

*Dode*

The price of soda To B. Dynamite is 5.5¢ per 100 lbs 45% - We buy 55% which is practically pure Bertrams. Soda & we pay on the basis of 45% which brings it to about \$1.13 per 100 lbs. We use about 2.8 lbs of 55% Soda for ton of dynamite \$1/100 To B.

**Edison Ore Milling Syndicate, Ltd., and Related Companies  
Cost Estimates (1901, 1907)**

This book cover the periods November-December 1901 and February 1907. It was used by draftsman William Simpkin and unidentified authors. Most of the book consists of tissue copies of construction and equipment cost estimates for the Dunderland works (1901). A few pages, dating from 1907, relate to pattern drawings and the cost of installing giant rolls at the New Jersey and Pennsylvania Concentrating Works and the Carnegie Steel Co. The book contains 506 numbered pages; pages 69-500 are blank.

B  
C  
D  
E  
F  
G  
H  
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J  
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Z

Estimate. Conveyor. Sunderland Plant

H.1.01

Crusher House to Dryer

45' Belter 518 ft. vertical height 90 ft		
1042 ft of belt at 2.50	2608	
2000 ft. - Rubber edging	821	
Head - Tail Pulleys, frames, shafts, } gears, gear cases, bearings etc	800	
Conveyor Runway between buildings, including corrugated iron - flooring		
410 ft - 2.50 ft per ft. 102 14.2	5740	
3000 ft shafts, bearings - 30' apart on carrying side, 60' apart return. Side return every 20 ft		
518 ft at 4.25 per ft.	2317 50	
Motor 100 HP - 20 per HP	2200	14183.50
(1000 lbs per hr - pickup 2 1/2 ft per 100 ft)		

Dryer House to Stock House

45' Belter 578 ft. vertical height 52 ft		
1174 ft of belt at 2.50	2925	
2000 ft. - Rubber edging	818	
Head - Tail Pulleys & } Conveyor Runway between buildings	800	
250 ft at 14.2	3500	
3000 ft - 578 ft at 4.25	2601	
1 Travelling Skipper	750	
Motor 50 HP - 20 per HP (1000 tons)	1000	12244
75	1500	12661

Return belt Dryer to Crusher Area.

24' Belter 570 ft. 4 ft		
1000 ft of belt at 1.25	1250	
2100 ft. - Rubber edging	825	
Head - Tail Pulleys & } Conveyor Runway between buildings	825	
100 ft at 10 per ft.	4100	
3000 ft - 570 ft - 7.2	1560	
Motor 70 HP - 20 per HP (500 tons)	600	8975

Carriage forward

36557-50

## Conveyer - Sunderland

Carried forward

Stock House to Grinding House		
26' Belt	+24' ft Vertical height 22'	
980 ft	of belt at 2" per ft	1960
1960	" " rubber edging	490
Head + Tail pulleys	"	715
Conveyer Runway between buildings		
240 ft	at 12"	2880
2880	+14' ft at 2"	1694
Motor	75 HP 22" (1000 hrs)	1800
		9829

Grinding House to Screen House		
18' Belt	+12' ft Vertical height 40 ft	
876 ft	belt at 2"	2090
16 ft	" rubber edging	412
Head + Tail pulleys	"	800
Conveyer Runway between buildings		
265 ft	at 14"	5152
5152	+12' ft at 2"	1854
Motor	100 HP 20" (1000 hrs)	2000
		12314

Return Belt Screen House to Grinding House		
26' Belt	+24' ft Vertical height 22'	
920 ft	of belt at 2"	1640
1640	" " rubber edging	412
Head + Tail pulleys	"	715
Conveyer Runway between buildings		
240 ft	at 12"	4416
4416	+24' ft at 2"	1914
Motor	40 HP - (500 to 600 hrs) - 22"	800
		6395
		4444

Carried forward

66740  
66505 50

## Conveyors, Sunderland

Conveyor forward

Screen House to Blower H<sub>2</sub> #1.

36" Belt 264 ft. Vertical height 70 ft		66 50 50
540 ft of belt at 2"	1 2 10	50
1000 - " Rubber edging	2 7 0	
Head & Tail pulleys etc	7 1 5	
Conveyor Runway between buildings		
205 ft at 12"	2 4 6	
Idlers etc 264 ft at 3"	9 2 7	
Motor 65 HP. 20" (200 ton per hr)	1 3 0 0	67 5 5

Blower House #1 to Magnetite Separator

36" Belt 426 ft. Vertical height 84 ft		
565 ft of belt at 2"	1 7 3 0	
1700 - " Rubber edging	4 2 5 0	
Head & Tail pulleys etc	7 1 5	
Conveyor Runway between buildings		
372 ft at 12"	4 4 6 7	
Idlers etc 426 ft at 3"	1 4 9 1	
Motor 70 HP. 20" (200 ton)	1 4 0 0	102 22 50

Return Belt from Magnetite Separator to meet incoming ore

24" Belt 260 ft. Vertical height 75 ft		
535 ft belt at 12"	6 7 5 75	
1070 - " Rubber edging	2 0 7 50	
Head & Tail pulleys etc	6 2 5 00	
Conveyor Runway between buildings		
216 ft at 10"	2 1 6 5 0	
Idlers etc 260 ft at 3"	7 5 0	50 11 25
Motor 25 HP. 20" (200 ton)	5 0 0	50 11 25

Transfer Tower 11 20 20

11 20 20	11 50	11 50
----------	-------	-------

Conveyed forward

89 50 25  
89 50 25



## Conveyor - Sunderland

Brought forward

89,888.25  
89,687.25

## Magnetite Separator to Hematite Separator.

24 Belt 350 ft. - Vertical height 80 ft  
 75 ft of belt at 125 951.25  
 1570 ft. - Rubber edging 392.50  
 Head & Tail Pulleys 625.00  
 Conveyor Runway between buildings  
 312 ft. at 105 3120.00  
 S idlers 2 350 ft. at 35 1540.00  
 Motor 40 HP. 205 (400 lbs) 800.00

7056.75

## Hematite Separator House to Tower

24 Belt 165 ft. - Vertical height 25 ft  
 245 ft of belt at 125 431.25  
 650 ft. - Rubber edging 172.50  
 Head & Tail Pulleys 625.00  
 Conveyor Runway between buildings  
 104 ft. at 105 1040.00  
 S idlers 2 165 ft. 35 495.00  
 Motor 15 HP. 205 (300 lbs) 300.00

8066.75

## Transfer Tower 15 x 20

950

950

## Magnetite Separator House to Blower House

24 Belt 552 ft. - Vertical height 60 ft  
 1120 ft of belt at 125 1400.00  
 2240 ft. - Rubber edging 560.00  
 Head & Tail Pulleys 625.00  
 Conveyor Runway between buildings  
 200 ft. at 105 2600.00  
 S idlers 2 552 ft. at 35 1656.00  
 Motor 25 HP. 205 (300 lbs) 800.00

7481

Carried forward

108,077.75  
107,887.75

## Conveyors. Sunderland.

Blower House #2 to Magnetic Stock House  
 24 Belt 336 ft. Vertical height 82 ft.  
 600 ft. of belt at 125 856.25  
 1370 - Rubber edging 842.50  
 Head + Tail Pulleys 625.  
 Conveyor Runway between buildings  
 257 ft. at 10 257.0  
 Idlers 335 ft. at 3 1009  
 Motor 20 HP 20 (200 lbs) 400  
 6071.75

## Tower to Blower House #3

24 Belt 296 ft. Vertical height 60 ft.  
 600 ft. of belt at 125 756.25  
 1210 - Rubber edging 802.50  
 Head + Tail Pulleys 625  
 Conveyor Runway between buildings  
 255 ft. at 10 2550  
 Idlers 296 ft. at 3 888  
 Motor 25 HP 20 (250 lbs) 500  
 5621.75

## Blower House #3 to Hematite Stock House

24 Belt 336 ft. Vertical height 82 ft.  
 600 ft. of belt at 125 856.25  
 1370 - Rubber edging 842.50  
 Head + Tail Pulleys 625  
 Conveyor Runway between buildings  
 288 ft. at 10 2880  
 Idlers 336 ft. at 3 1008  
 Motor 20 HP 20 (250 lbs) 400  
 8111.75

## Spirals for outside conveyor

Runways - 98 tons - 50¢ per lb.

9800 9800

Carried forward

135677.00  
 135677.00

Dunderland Estimate -  
Conveyors

12-28-'01.

*1 Conveyer House to Dryer		
36' Belt, 411 feet C. to C. Vert. ht. 77 ft.		
836 ft. belt, at \$2.22	\$1672.00	
1672' rubber edging	301.60	
Head and tail pulleys, frame, shafts, gears, gear cases, bearings	409.94	
Conveyer runway between buildings, including corrugated iron covering and sheet iron flooring - 345 ft. at \$2.22	5312.00	
66 ft. of interior framing at \$2.22	158.40	
2 idlers, bearings, side idlers, etc.		
411 ft. at \$2.22 per foot	1479.60	
5 Bents - average \$120.22 each	600.00	\$8133.54

— 30 H.P. Motor - 500 tons per hr.

*2 Return Belt, Dryer to Crusher		
24' Belt, 430 feet C. to C. Vert. ht. 24'		
874 ft. belt, at \$1.32	1092.50	
1748' rubber edging	524.40	
Head and tail pulleys, frame, shafts, gears, gear cases, bearings	394.77	
Conveyer runway between buildings, including corrugated iron covering and sheet iron flooring - 338 ft. 200 lbs. at \$2.22	2704.00	
92 ft. of interior framing at \$2.22	184.00	
7 Bents - average \$120.22 each	840.00	
Idlers, idler bearings, etc. - 430 ft. at \$2.22	1290.00	7029.67
— Motor - 20 H.P.		

\*3 Dryer to Rock Stock House

36' Belt, 353 ft. C. to C. Vertical height 56 ft.		
680 ft. belt, at \$2.22	1362.00	
1360' rubber edging	408.00	
Head and Tail Pulleys, etc.	409.94	
Conveyer runway between buildings - 303 ft. at \$2.22	2908.80	
30 ft. of interior framing at \$2.22	72.00	
Idlers, idler bearings, etc. - 353 ft. at \$2.22	1198.80	
3 Bents - average \$120.22 each	360.00	6717.54
— Motor - 30 H.P.		
Carried forward -		721,880.75

Conveyance.

Brought forward

\*4 Conveyance into top of Rock Stock House

36 Feet - 161 ft. C.T.C. - 1000	
356 ft. of 36 Feet. at \$2.22	781.20
712 ft. rubber siding	2112.00
Head and tail pulleys, etc.	409.94
161 ft. interior framing at \$2.22	356.40
Delivered roller bearings 161 ft. at \$5.00	805.60
1 Travelling Drifter	680.00
	2984.54

Motor - 25 H.P.

\*5 Conveyance into top of Rock Stock House

36 Feet - 204 ft. C.T.C. - Vertical height 7 ft.	
482 ft. of 36 Feet. at \$2.22	964.00
962 ft. rubber siding	288.60
Head and tail pulleys, etc.	409.94
204 ft. interior framing at \$2.22	561.60
Delivered roller bearings 204 ft. at \$5.00	842.00
	3066.54

Motor - 40 H.P.

\*6 Conveyance from Rock Stock House into Stone Crushing House

36 Feet - 255 ft. C.T.C. - Vertical height 67 ft.	
554 ft. of 36 Feet. at \$2.22	1048.00
1048 ft. rubber siding	3144.00
Head and tail pulleys, etc.	409.94
Conveyance running into building - 238 ft. at \$9.62	2284.80
41 ft. interior framing at \$2.22	98.40
Delivered roller bearings 255 ft. at \$3.50	912.00
3 Drifters	360.00
	5432.54

Motor - 50 H.P.

Carried forward  
(2)

5432.54

## Conveyors -

Brought forward -

7 Conveyors - Top End Grinding Rolls.

43' Belt - 158 ft. C. to C. 3 S' Dumps.

270 ft. 48' Belt, at \$2.22

740 ft. rubber edging -

Head and tail rollers, etc.

5' 153 ft. interior framing, at \$1.22

Idle &amp; idler bearings 178 ft. at \$4.22

3 S' Dumps, at \$2.52

\$925.00

3422.00

2456.22

6422.40

64718.90

438.66 = 3203.18

Motor - 25 H.P.

8 Conveyors - Bottom End Grinding Rolls.

48' Belt - 107 ft. C. to C. line.

245 ft. 48' Belt, at \$2.22

1574 ft. rubber edging -

Head and tail rollers, etc.

191 ft. interior framing, at \$1.22

Idle &amp; idler bearings 191 ft. at \$4.22

\$900.00

2337.60

2428.22

532.80

869.08

3087.67

Motor - 20 H.P.

9 Conveyors - Grinding House to Bureau

48' Belt - 362 ft. C. to C. Vertical height 77 ft.

698 ft. 48' Belt, at \$2.22

1296 ft. rubber edging -

Head and tail rollers, etc.

Conveyors runway between buildings

30 ft. interior framing, at \$1.22

Idle &amp; idler bearings 362 ft. at \$4.22

216 Belts

1745.00

218.80

456.22

3494.40

84.00

1358.10

220.00

8474.52

Motor - 100 H.P.

1,000 tons

Carried forward

(3)

## Conveyors

Brought forward

*10 Conveyors - Top of Screens	
48' Belt, 229 ft. C to C, 5' S' Dumps	
572 ft. 48' Belt, at \$2.50	1430.00
1144' rubber edging	343.20
Head and tail pulleys, etc.	456.22
Interior framing, 229 ft., at \$2.33	641.20
Idlers, etc. 229 ft., at \$4.55	1041.95
5' S' Dumps, at \$14.62	731.10
	+ 652.77

— Motor - 30 H.P.

\*11 Conveyors - Return Belt Screens  
to Grinding House

36' Belt, 573 ft. C to C Vertical height 23 ft.	
1158 ft. 36' Belt, at \$2.00	2316.00
2316' rubber edging	692.80
Head and tail pulleys, etc.	409.94
Conveyors running between buildings	
1310 ft., at \$9.50	2976.00
262 ft. interior framing, at \$2.28	628.80
Idlers + idler bearings 672 ft., at \$3.50	2059.20
4 Bents	480.00
	9564.74

— Motor - 50 H.P. 6600 rpm/hr.

\*11 1/2 Conveyors - Tunnels below Screens

36' Belt, 252 ft. C to C level	
518 ft. 36' Belt, at \$2.00	1036.00
1036' rubber edging	310.80
Head and Tail Pulleys	499.94
252 ft. interior framing, at \$2.50	604.80
Idlers + idler bearings 252 ft. at \$3.50	907.20
	3268.74

— Motor - 20 H.P.

Carried forward  
(4)

15104.84

## Conveyors

Brought forward-

\$ 65,404.89

#12 Conveyer. Screens to Blower House #1.

36 Belt, 263 ft. C to C, Vertical height 89 ft.

528 ft. of 36" Belt, at \$2.52

1080.00

1100 ft. rubber edging.

330.00

Head and tail pulleys, etc.

409.94

Conveyer runway between buildings

239 ft. at \$9.52

2294.40

24 ft. interior framing, at \$2.22

57.60

Sides + idler bearings - 263 ft., at \$3.52

946.80

5 Bents -

600.00

\$ 718.74

— Motor - 40 H.P.

#13 Conveyer. Top of Blower House #1.

36 Belt, 165 ft. C to C, 25" Dumps -

344 ft. 36" Belt, at \$2.52

\$ 688.00

688 ft. rubber edging -

206.40

Head + tail pulleys, etc.

409.94

165 ft. interior framing, at \$2.22

396.80

Sides + idler bearings - 165 ft., at \$3.52

594.00

2294.34

— Motor - 25 H.P.

#14 Conveyer. Bottom Blower House #1.

36 Belt, 166 ft. C to C, level.

346 ft. of 36" Belt, at \$2.52

\$ 692.00

692 ft. rubber edging -

207.60

Head and tail pulleys, etc.

409.94

166 ft. interior framing - at \$2.22

398.40

Sides + idler bearings - 166 ft., at \$3.52

597.60

2305.54

— Motor - 15 H.P.

Carried forward

\$ 75,923.51

## Conveyors.

Brought forward.

*13 Conveyer - Oliver H. to Magnetite Magnets - Vertical height 83 ft.	
36' Belt - 367 ft. C. to C.	
748 ft. of 36' Belt at \$2.22	\$ 1496.00
1496' rubber edging.	448.80
Head and tail pulleys, etc.	409.94
Conveyer runway between buildings	
327 ft. at \$9.20	3139.20
40 ft. interior framing, at \$2.25	96.00
Idlers + idler bearings 367 ft. at \$3.22	1321.20
Belts and Transfer Power.	720
	\$ 7631.14

Motor - 40 H.P. 380 tons.

\*16 Conveyer. Top of Magnetite Magnets.

36' Belt - 273 ft. C. to C. - 7 dumps.	
700 ft. of 36' Belt at \$2.22	\$ 1400.00
1400' rubber edging.	420.00
Head and tail pulleys, etc.	409.94
273 ft. interior framing at \$2.22	655.20
Idlers + idler bearings 273 ft. at \$3.22	982.80
7 Dumps, at \$135.22	947.24
	4812.18

Motor - 25 H.P.

\*17 + \*18. Returns to Magnetite Magnets.

24' Belt - 507 ft. each C. to C. Vert. ht. 40 ft.	
2056 ft. of 24' belt, at \$1.22	\$ 2570.00
4112 ft. of rubber edging.	1233.60
Head and tail pulleys connected	584.00
Conveyer runway between buildings	
430 ft., at \$8.20	3440.00
584 ft. interior framing, at \$2.22	1168.00
1014 ft. idlers + idler bearings at \$3.22	3042.00
8 Belts -	960.00
	12,997.60

Motor - 40 H.P.

This drives both conveyers.

Carried forward.

(6)

\$ 101367.45



## Carryover.

## Brought forward

*19 Magnetite Magnetite to Hematite Magnetite	
24" Belt - 659 ft. C. to C. - Vertical height, 7 ft.	
1532 ft. 24" Belt, at \$1.22	1,665.00
2636" rubber edging	799.20
Head and tail pulleys, etc.	394.77
Carryover runway between buildings	
34.5 ft., at \$8.22	2760.00
3/4 ft. interior framing, at \$2.22	628.00
Idlers, etc. - 659 ft., at \$3.22	1977.00
7 Drums -	840.00
	9063.97

## Motor - 40 H.P.

*20 Magnetite Magnetite to Belt carrying	
concentrate from Hematite Magnetite	
to Delivery House No. 2 -	
24" Belt - 652 ft. C. to C. - Vertical height 5 ft.	12.00
1318 ft. of 24" Belt, at \$1.22	1647.50
2636" rubber edging	799.80
Head and tail pulleys, etc.	394.77
Carryover runway between buildings	
33.8 ft., at \$8.22	2704.00
3/4 ft. interior framing, at \$2.22	628.00
Idlers + idler bearings - 652 ft., at \$3.22	1946.00
	8121.07

## Motor - 25 H.P.

*21 Top of Hematite Magnetite -	
24" Belt - 273 ft. C. to C. - 7 drums	
700 ft. of 24" Belt, at \$1.22	875.00
1400" rubber edging	420.00
Head and Tail Pulleys, etc.	394.77
270 ft. interior framing, at \$2.22	546.00
Idlers + idler bearings - 273 ft., at \$3.22	819.00
7 "S" drums, at \$106.66	746.68
	3801.45

## Motor - 35 H.P.

Carried forward.

123,363.97

## Conveyors.-

Brought forwards

\*22, \*23, \*24 concentrates below

Hematite Magnets-

24' Belts-296 ft. each C to C-level-

1818 ft. of 24' Belt, at #122

3636 " rubber edging-

888 " interior framing, at #222

Idlers and idler bearings-888 ft., at #322

Head & tail pulleys-combination-  
for the three belts-}

2272.50

1090.80

1776.00

2664.00

620.00

\$ 8453.30

## — Motor - 40 H.P.

\*25 &amp; \*26 to Dump Hematite Magnets-

24' Belts-500 ft. each C to C-level-

2028 ft. of 24' Belt, at #122

4056 " rubber edging-

590 " interior framing, at #222

Idlers &amp; idler bearings-1000 ft., at #322

410 ft. Conveyor outside, at #822

Belts - 4600 - 8 at #2022

Head & tail pulleys-combination  
for the two belts-}

2535.00

1216.80

1180.00

3000.00

3280.00

960.00

584.00

12,755.80

## — Motor - 25 H.P.

\*27 Hematite Magnets to Idlers Hs.-

24' Belt, +29 ft. C to C-Vest-bk., 77 ft.

872 ft. of 24' Belt, at #122

1744 " rubber edging

Head and tail pulleys, etc-

Conveyor runway between buildings-

351 ft. at #822

78 ft. interior framing, at #222

6 Belts, at #12022

1090.00

523.20

394.77

2808.00

156.00

720.00

5,691.97

## — Motor - 30 H.P.

300 tons

Carried forwards

149,254.99

## Conveyors-

Brought forward-  
 #28 Convey. Top of Blower House #2  
 24' Belt-12 1/2 ft. to to b. 2 Dumps-  
 269 ft. 24' Belt, at \$1.25 \$336.25  
 538' rubber edging- 161.40  
 121' interior framing, at \$2.00 242.00  
 Head and tail pulleys, etc. 394.77  
 Idlers & idler bearings-12 1/2 ft. at \$3.00 363.00  
 2 Dumps, at \$106.25 213.280  
 \$17,100.70

Motor-20 H.P.- (for #28)-  
 #29 Bottom of Blower House #2  
 24' Belt-2 1/4 ft. to to b. Vert. height 7 ft.  
 442 ft. of 24' Belt at \$1.25 \$552.50  
 884' rubber edging- 265.20  
 214' interior framing, at \$2.00 428.00  
 Head and tail pulleys, etc. 394.77  
 Idlers & idler bearings-2 1/4 ft. at \$3.00 642.00  
 2282.47

Motor-15 H.P.-  
 #30 Blower House #2 to  
 Concentrate Stock House.  
 24' Belt-780 ft. C. to C. level  
 1574 ft. 24' Belt, at \$1.25 \$1967.50  
 3148' rubber edging- 944.40  
 Conveyer runway between buildings  
 780 ft. at \$8.00 6240.00  
 Head and tail pulleys, etc. 394.77  
 Idlers & idler bearings-780 ft. at \$3.00 2340.00  
 10 Dents- 1200.00  
 13,086.67

Motor-25 H.P.-

Carried forward-

\$166,333.83  
 166,333.83

## Conveyors.

Brought forward  
 51 Conveyors in Roof of  
 Concentrate Stock House -  
 24' Belt - 161 ft. C. to C. - level  
 336 ft. of 24' Belt, at \$1.25  
 672' rubber edging -  
 161' interior framing, at \$2.00  
 Head and Tail pulleys, etc.  
 Idlers and idler bearings, 161 ft., at \$3.00  
 Travelling Trippler

\$ 160,000.00  
 420.00  
 201.60  
 322.00  
 294.77  
 483.00  
 680.00 2471.37

— Motor - 25 H.P.

Total.

163,800.00

## Magnetics Magnets.

160 sets of 3 high.

80 " " 6 " "

960 Magnets - 200 lbs. each -

288,000 lbs. at \$ .11,520.00

Labor - 76,800 " " 20. 15360.00

Angle iron framework, chutes etc.  
for the 160 sets of 3 high -

176,000 lbs. at \$ .3629.00

Angle iron framework, chutes etc.  
for the 80 sets of 6 high -

+ 07,360 lbs. at \$ 8147.20

Labor on 288,000 lbs. at 3.

8640.00

" " 583,360 " " 2.

11667.20

Labor winding 960 magnets at \$62

5760.00

\$64,614.40

Motor - see list.

No erection.

# Hematite Magnets-

256 sets of 20 high.

5120 Magnets - 360 lbs. each -

1,536,000 lbs. @ \$ 61440.00

Copper - 409,600 lbs. @ 81920.00

Angle iron in framework,  
shuts in shutters, etc. -

1,020,416 lbs. @ 20408.32

Labor on 1,536,000 lbs., etc. 46,080.00

1,020,416 lbs. @ 20408.32

Labor, winding 5120 magnets, etc. 30,720.00

\$260,976.64

Motor.

See motor list.

No erection.

## Motors.-

Hoist for Crusher Plant-	150 H.P.
Crusher Roller. 2 - 75 H.P.	150 "
First Set 5 ft. Roller-	60 "
Second " " "	80 "
Third " " "	100 "
Fourth & Fifth. . . - 100 H.P. each	200 "
Top Roller Feed.	5 "
Bottom " "	10 "
Ship Tip.	10 "

6 Fine Grinding Roller 120 H.P. each 900 H.P.

## — Dryer House.

Exhausters - 2 - 25 H.P. each.	50 H.P.
Furnace Blower.	15 "
Shaker Mechanism - 2 - 5 H.P. each	10 "

## — Rock Stock House.

Roller Feeds - 3 of 10 H.P. each.	30 H.P.
Exhaust Fan.	25 "

## — Screen House.

Roller Feeds - 6 of 15 H.P. each.	90 H.P.
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## — Blower House #1.

Blowers. 16 of 5 H.P. each	40 H.P.
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## — Blower House #2.

Blowers. 12 of 5 H.P. each	60 H.P.
in Compressor!	150 "

4 Scrapers Conveyors - 25 H.P. each 100 H.P.

All Belt Conveyors - see list. 955 "

Motors - 3230 H.P.

Dynamos	5230 H.P.
Magnetite Magnets.	75 "
Magnetite	750 "
	4035 H.P.

Less 4000 H.P. Dynamos, at \$1625 64000.00  
 3230 " Motors, " \$1825 58140.00

\$12140.00 \$12140.00

## 24', 36' and 48' Belt Conveyors-

## Head and Tail Pulleys-

## 24' Belt Conveyors-

Cast iron-	2,250 lbs. at 2 $\frac{1}{2}$	\$ 36.25
Steel shafting-(4 $\frac{1}{2}$ " + 2 $\frac{1}{2}$ ")	426 " - 3	12.78
Bolts, rods, etc.	135 " - 12	3.71
Maple Staves-		2.70
Spur Gears-		48.00
2-2 $\frac{1}{2}$ " Bearings at 13.92	} Cost	27.84
2-3 $\frac{1}{2}$ " " " 19.25		38.16
	complete-	

## Tail Pulley-

Cast Iron	1094 lbs. at 2 $\frac{1}{2}$	27.35
Steel shaft-	237 " - 3	7.11
Bolts, Rods, etc.	100 " - 12	2.75
Maple Staves-		2.70
2-3 $\frac{1}{2}$ " Bearings at 19.25	} Cost	38.16
2-4 $\frac{1}{2}$ " " " 22.00		
Complete-		
		<u>127.26</u>
		\$ <u>394.77</u>

Head and Tail Pulley  
for 36' Belt Conveyors-\$ 409.94Head and Tail Pulley  
for 48' Belt Conveyors-\$ 456.22Above does not include  
cost of erection-



## 24', 36' and 48' Belt Conveyors-

Cost per linear foot of 24'  
including Idler Bearings, Trough Pieces,  
Idlers and Vertical Idlers-

In 30-ft. length-

20-1 1/2" shafts-	240 lbs. at 3	720
40 Spindles-	360 " " 3	1080
40 Bearings	360 " " 4	1440
Bolts and pins-		160
Maple staves-		720
Chain and packing-		420
120 Oil plugs		600
Labor on 960 lbs., at 3-		2880
2 Vertical Idlers-		
Cast Iron	70 lbs. at 4	280
Steel Spindles-	6 " " 3	18
Bolts-		25
Cast Iron Blocks-	12 " " 3	36
Labor on 88 lbs., at 4-		352
4 Plugs-		20
		<hr/> \$ 87.51

24' -  $\$3.22$  per ft.

36' -  $\$3.52$  " "

48' -  $\$4.55$  " "

Cost of erection not included-

'S' Dumps in Bell Conveyors  
24', 36' and 48' Belts

24'-		
1 Shaft-	168 lbs, at 3.	\$ 5.04
2 Spiders-	220 " " 2 1/2	5.50
Bolts-		1.35
Maple 65 ft., at \$30.00		1.95
2 - 2 1/2" Bearings - at \$13.22		27.84
Labor on 388 lbs, at 3.		11.64
		<u>\$ 53.32</u>
2 Shafts, etc.-		<u>\$106.64</u>

36'-		
1 Shaft-	220 lbs, at 3.	\$ 6.60
2 Spiders-	220 " " 2 1/2	5.50
Bolts-		1.35
95 ft. Maple, at \$30.00		2.85
2 - 3 1/2" Bearings - at \$19.00		38.16
Labor on 440 lbs, at 3.		13.20
		<u>\$ 67.66</u>
2 Shafts, etc.-		<u>\$135.32</u>

48'-		
1 Shaft-	265 lbs, at 3.	\$ 7.95
2 Spiders-	260 " " 2 1/2	6.25
Bolts-		1.55
125 ft. Maple at \$30.00		3.75
2 - 3 1/2" Bearings - at \$19.00		38.16
Labor on 515 lbs, at 3.		15.45
		<u>\$ 73.11</u>
2 Shafts, etc.-		<u>\$146.22</u>

## 9' Scraper conveyors in Blower Houses.

1 Head and 1 Tail Pulley.			
Iron castings.	2,002 lbs., at \$		50.05
channels, angle iron,			
sheet steel, etc.	2,935 " " "		58.70
Shafting.	710 " " "		21.30
Pins.	520 " " "		10.40
Gears.			120.00
2 - 2 1/2" Bearings at 13.25			27.84
4 - 3 1/2" " " 19.00			76.32
Labour on 6267 lbs., at 2.			125.34
			<u>\$489.95</u>

9' Scraper conveyor costs  
 \$9.58 per linear foot, including  
 Rope, Rope clamps, blank  
 Bolts, Pins, Wheels, Blades,  
 Rail, etc.

2 conveyors in Blower House No. 1 -  
 each 148 ft. long -  
 2 Head and 2 Tail Pulleys. \$979.90  
 396 ft. at \$9.58. 3793.68

2 conveyors in Blower House No. 2 -  
 each 154 ft. long -  
 2 Head and 2 Tail Pulleys. \$979.90  
 308 ft. at \$9.58 2950.64  
\$8,704.12

- Erection -

# Dryer House

## 2 Dryers-

Plates, girders etc., bottom chute, furnace castings,		
shaker and distributor plates, 285,000 lbs. at $\frac{25}{100}$	12,500	
Castings machined-	12,240 - 28	306.00
Machine work -	" " 3	367.20
Steel sheet and angles-	19,520 - 2	390.40
Labor on same-	" " 2	390.40
Shafting-	8,636 - 33	237.69
Machine work-	" " 3	259.08
Struct. and tank steel-	17,000 - 2	340.00
Labor on same-	" " 2	340.00
Rope lammers-	150 - 3	4.50
Labor on same-		10.00
12 Screens-		36.00
Bolts-		267.86
Asbestos in joints-		54.00
2 Dust chasers, with steel chute. 9,000 lbs.		180.00
Labor on same-		180.00
2 - 80" Exhausters (Buffalo)-		410.00
1 Blower for Furnaces-		110.00
2 Pyrometers, with fixtures-		100.00
44,000 Fire Brick at $\frac{1}{2}$ 23 <sup>00</sup>		1012.00
25,000 Red " " 8 <sup>00</sup>		2000.00
Foundation bolts-	560 - 3	1680
Firing tools-		18.00
	12,354.93	12,354.93

## Erection -

2 Motors - 25 H.P. Exhausters.	
1 " 15 H.P. Blower for Furnaces	
2 " 5 H.P. Shaker Mechanism	

## Rock Stock House

Three panels of 7 lights each  
1 Panel -

Castings-	9686 lbs. at	26.	242.16
Labor on same	" " "	3.	290.58
Shilled liners-	959 " "	23.	31.17
Shafting-	1792 " "	3.	53.76
Labor on same.	" " "	3.	53.76
Steel keys, turned bolts, etc.	46 " "	3.	2.88
N. D. rods, bolts, nuts etc	385 " "	23.	10.39
7 lights, at \$20.00 each			210.00
8-2 1/2" Bearings at \$13.25 each			112.36
4-2 1/2" " " \$10.50 "			147.84
			<u>1154.09</u>

3 Panels

\$3,462.27

Erection.

— 3-10 H.P. Motors - see motor list.

## Furnace for Rock Stock House

Castings-	5,000 lbs. at \$2.00	100.00
Bolts, Rods etc.	400 " "	8.00
20,000 Red Brick, at \$8		160.00
4,000 Fire " "	at \$23.00	92.00
Firing Tools-		12.00

Exhaust Fan

400.00
<u>847.00</u>

— 1-25 H.P. Motor - for Fan.

Erection.

# Shindig House

6 Rolls of First Stringing Paper

1 Roll of Paper for Practical Paper

Grey Iron Castings

6 Sheets Plates

6 Spacing Ropes 100 lbs.

Brass Castings

Diaphragms

Hammered Sheet Metal

Steel Shafts 1/2" dia.

Old R. & Macab. R. shaft

Steel Cast Standard Shafts etc.

Rolls, rods, etc.

Labor on 92,680 lbs. at 0.2

Foundation Plates - 12,260 lbs. at 2 1/2

6 Lightning Dances

Cast Iron Castings

Brass Castings

Diaphragms

Steel Shafts (3/4")

32 ft. 9" Channels

28 ft. 9" Channels

Steel Ropes, rods, etc.

Rolls, rods, etc.

Labor on 5046.53

350 ft. Nine Ropes

6 Rolls

1635.58

59.80

660.00

192.16

5.60

659.28

4.28

217.40

33.90

79.35

3490.44

4838.81

8309.93

20.70

337.18

94.20

39.60

198

6.75

1142

90

723

16208

262.39

424.47

42.00

9113.55

54,681.30

## Grinding Stone:-

6 Sets of Fine Grinding Rolls-  
Feed Mechanism, and rollers above  
and below Rolls: For 1 Set of Rolls-

Gray Iron Castings - lbs.	1762.24	44.00
Chilled Iron " " "	58.4	31.89
Brass " " "	2.9	5.98
Steel Shafting (3" x 2")	216.0	6.48
50 ft. 6" dia. shaft	17.10	4.10
12" x 6" " "	22.98	4.16
Angle Iron & Steel Bolts	20.00	2.25
Steel Keys, Trunk Bolts, etc.	46.3	2.25
Bolts, nuts, washers, etc.	118.24	2.49
Sprockets and Chains	50.0	13.90
4 x 2 1/2" Bearings to 10" dia	0.24	4.24
Labor on	4442.4	47.66
Material 22 x 3 1/2 x 2 1/2		23.71

6 Rolls-

Material 22 x 3 1/2 x 2 1/2	33.7.5	2010.26
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6 Fine Grinding Rolls including  
tightening mechanism, roller below  
rolls, belt, roller feed, and roller  
conveyor to roller feed. -

12" dia. x 6" thick	22.2	5.7
32 x 1/2 x 1/2 Channels	7.1	11.2
Construction	70.3	7.25
Steel keys, washers, etc.	20.3	7.25
Labor on	20.3	7.25

6 - 120 H.P. Motors - see motor list on p. 25	2.2.30	24.7
-----------------------------------------------	--------	------

300 ft. 7" dia. Pipe	2.20	2.20
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3 Rolls-

2-071.00

## Screens.

1152 Screen Plates, arranged in  
6 groups. Each group containing  
32 boards each each board 4 sets -  
6 high - making 192 sets.

Last Iron Shoppers and Plates above  
Screens for Roller Feed - 192 in  
number. Shoppers 5'-0" long. 370 lbs each  
(No machine work) 71,040 lbs. at 24. \$ 1776.00

1344 ft. 10" Pipe at \$4.25 per 60 ft (52760 lbs)	2419.20
192 C.B. Pipe and 2,840 lbs. at 28.	96.00
36 " " Stands 2,880 " " 28.	72.00
660 ft. 2 1/2" shafting. 10,428 " " 22.	260.70
6 sets of four bearings at \$36.00	216.00
48 " Motors " " \$10.83	480.00
180 2 1/2" Bearings at \$10.24 complete.	1902.80
Scales above and below each group of Screens formed of 1/4 sheet iron in the form of a pipe -	
9870 - 6 89,220 lbs. at 2.	1884.40
1152 Screens at 50 cts.	576.00
Screen Frames 46,080 lbs. at 2.	921.60
Screen boxes 190 lbs. at 9.120 " " 24	228.00
" " 240 " " 4 1,440 " " 24	36.00
Labor on 10,360 " " 3	316.80
" " 176,208 " " 2	3524.16
	<u>\$ 14,007.66</u>

- 3-15 H.P. Motors - see motor list.

No section



## Blower House No. 1.-

## 32 Blowers-

Blower-	lbs	at	*
Sheet Steel and Angle Iron	1411	2	2822
Blades-- " "	335	2	670
Castings- Blade location-	108	2 1/2	270
Slats Sheet Steel-	379	2	1158
Gearings - 5 at \$7.22-			3600
Brackets- Cast Iron.	180	2 1/2	450
Hanger - " "	70	2 1/2	175
Gears-			2035
Gear Cases- Cast Iron.	40	2 1/2	100
" " - Steel	310	2	620
Shafting-	180	3	540
			<u>12340</u>
Labor etc	3213	3	<u>9639</u>
			<u>21979</u>

Bin-	lbs	at	*
Sheet Steel and Angle Iron	1585	2	
" " " " Air Pipe	1016	2	
" " " " Return Valve	650	2	
" " " " Chute below	1609	2	
" " " " "	40	2	12000
" " " " Hopper	590	2	
Cast Iron Connection	175	2 1/2	
" " Hopper-	370	2 1/2	
Sheet Steel and Angle Iron and Steel Sides	500	2	1550
Cast Iron at each 3"	75	2 1/2	
120 yds. Shafting-		8	960
Labor etc	6610	3	<u>19830</u>
			<u>34240</u>

1 Bin, Blower, Air Pipe and  
connecting Chutes - \$563.19- \$15022.08 \$15022.08

32 Bins-

Construction

16-5 H.P. Motors - See Motor List.

## Blower House No. 2-

24 Blowers-

1 Bin, Blower, Air Pipe and  
Connecting Shutes: \$563.19

24 Bins

\$ 13516.56 \$ 13516.56

— 12-5 H.P. Motors - see motor list.

- Erection -

12-28-01.

## Dunderland.

Structural Work - Houses -

Crusher House.	95 tons.
Hinders in Crusher House	82 "
Truckle Approach & Extension.	102 "
Dryer House.	187 "
Rock Stock House & Lean-to	158 "
Fine Grinding House	218 "
Screen House	331 "
Blower House #1.	234 "
Magnetite Separator House	485 "
Hematite	588 "
Blower House #2.	182 "
Concentrate Stock House	125 "
Coal Store House.	137 "
Engine House	80 "
Boiler	80 "
Store House.	60 "

3087 tons.

3087 tons erected at \$20.22 \$ 246960.00

Corrugated Covering, #18 and #20. 51587.00

Excavation, 206-6 cu yds., at 25 cts. 5151.50

Dry Wall, 2800 cu yds., at \$1.32 4200.00

Concrete, 3505 cu yds., at \$3.22 106150.00

Heavy Masonry } 5200 cu yds. at \$2.82 14500.00  
Crusher Piers }

Carried forward. \$329153.11

(1A)

Dunderland.

12-28-01.

Brought forward.

\$ 332,913.50

Machinery-

Giant Rolls 7'x7'	} Crushing Plant	\$ 69,221.50
5 Late, 5'x3' Rolls.		
Hoist.		
Tipping Arrangements		
Hoppers.		
Roller Feeds.		

Dryer House	12354.93
Rock Stock House	4309.27
Fine Grinding House	56701.56
Screen House	14007.66
Blower House #1.	18022.08
Magnetite Magnets	64614.40
Nematite	26097.664
Blower House #2.	13516.56
Chutes - Conveyors to Conveyors	15000.00
Belts & Scraper Conveyors,	
including Runways.	17751.032
Motors 3230 H.P., at \$ 18.22	58140.00
Generators 4000 H.P., at \$ 16.22	64000.00
Steam Plant 4000 H.P.	140000.00
Oiling System	2000.00
Heating	8000.00
Electrical appliances,	
wiring, lights, etc.	15000.00

4 Steam Shovels, at \$ 3000.00	12000.00
35-36" Rock Drills, at \$ 250.00	8750.00
Mining Supplies	5000.00
50 Mine Ships, at \$ 160.00 each.	8000.00
50 " Bars, " \$ 15.00	750.00
Two Air Compressors.	500.00
Small Machine Shop	2500.00
Erection of Machinery	69123.40
	1095,998.32

Total —

\$ 1428,911.82

## Estimate - Dunderland.

12-28-01.

Mr. Edison:

This estimate, so far as I have been able, is based on actual cost of material furnished to Stewartville, adding 2 or 3 cents per pound for machine work according to the class of work.

The Conveyor Runways have been calculated at 4 cents per pound, and allowance has been made for a walkway on each side of the belt. The length of the runways has been gotten by carefully laying out the various houses of the plant in their relative positions, with regard to the ground level and making the angle of all belt conveyors at 15°. If a walkway on one side of the belt only is desired, \$6500.00 can be deducted from this estimate.

Fine Grinding Rolls - as figured at cost, as built in Laboratory. Good Crusher, 5 ft. Rolls, Stoppers etc. in Crusher Plant are figured at 3 cents per pound, - complete but not erected.

Structural Work (Houses) is figured at \$80.00 per ton erected, and as the Blower Houses at Stewartville are almost identical with most of the houses for Dunderland I have taken them as our basis of calculation, adding 25% on account of greater height etc. necessitating somewhat heavier construction. Stock Houses being identical with Cement Stock 4' - ones, I have taken these as a basis.

Blower House at Stewartville:  
56' x 148' x 31' - 150 tons.

Houses at D underland:

Fine Grinding House	65' x 210' x 43'	200 tons
Screen House	40' x 275' x 74'	501 "
Blower	#1 - 56' x 198' x 52'	234 "
	#2 - 56' x 154' x 32'	182 "
Magnetite Sep. Hs.	56' x 315' x 13'	435 "
Hematite	56' x 315' x 12'	398 "

Above is made for comparison.

Estimate - Dunderland.

12-28-01.

Excavation - with which is also included levelling - is taken at 25 cents per cu. yd. - Dry Wall at \$1.22 - concrete at \$3.22 and Heavy Masonry at \$2.22 per cu. yd.

The amount added for erection of machinery in houses I have put at \$12,123.22, and this is only at the rate of  $\frac{1}{2}$  cent per pound.

No allowance has been made for freight, duties, timbers in stairs and floors, for R.R. tracks in the Plant proper, for handling coal from R.R. to coal store, for water for Boilers and Engines - or for conveyors to do - is.

Should not think this plant can possibly be erected for less than \$1,475,000 - exclusive of freight and duties, unless considerable change can be made in the amount of machinery to be used, size of houses, etc.

This estimate is based on handling 5,000 tons of coal ore every 20 hours, with no allowance has been made having in view future extension. Also the Magnetite Concentrator mingle with the Blende Concentrates, as they pass to the final blower house and are then passed to one common stock house.

By cutting out the ret. - belt from Magnetite Magnetite to best incoming - again in cut out \$12,497.22. By changing angle of conveyor belt between buildings from 13° to 14° - can save cut out \$3735.22.

Dunderland Estimate-  
Conveyors-

12-28-01.

## \*1. Crusher House to Dryer.

36' Belt, 411 ft. a to c, Belt lts. 77 ft.

836 ft. Belt, at \$2.22

1672' rubber edging, at 21 cents

Head and tail pulleys, frames, shafts,  
gears, gear cases and bearings.Conveyer runway between buildings,  
including corrugated iron covering and  
sheet iron flooring, 345 ft., at \$9.62

66 ft. of interior framing, at \$2.22

Idlers, bearings, side idlers etc.

411 ft., at \$3.22

8 Bents, average \$130.22 each.

1672.00

351.12

378.66

3312.00

188.40

1479.60

600

7951.77

— 60 H.P. Motor - 500 tons per hour.

## \*2. Return Belt, Dryer to Crusher.

24' Belt, 430 ft. c to a, level.

874 ft. Belt, at \$1.22

1748' rubber edging, at 21 cents

Head and tail pulleys, frames, shafts,  
gears, gear cases and bearings.Conveyer runway between buildings, via  
corrugated iron covering & sheet iron flooring

255 ft. - 180 lb. at \$8.22 per ft.

92 ft. of interior framing, at \$2.22

7 Bents, average \$130.22 each.

Idlers, roller bearings etc. 430 ft., at \$3.22

1092.80

367.08

349.94

2704.00

184.00

840.00

1290.00

6827.52

— Motor - 200 H.P.

## \*3. Dryer to Rock &amp; Tank House

36' Belt, 553 ft. a to c, vert. lts. 26 ft.

680 ft. Belt, at \$2.22

1360' rubber edging, at 21 cents

Head and tail pulleys, etc.

Conveyer runway between buildings -

503 ft., at \$9.62

30 ft. of interior framing, at \$2.22

Idlers, idler bearings, etc. 553 ft., at \$3.22

5 Bents, average \$130.22 each.

1360.00

286.60

378.66

2908.80

72.00

1198.00

360.00

6543.85

— Motor - 50 H.P. carried forwards — \$2143.14

# Corveyers-

## Brought forward-

* Corveyer in top of Rock Stock House		\$ 21 343.14
36' Belt, 161 ft. 2 to 2, each		
356 ft. of 36' Belt, at \$2.22	712.00	
712 rubber edging, at 21 cents	149.52	
Head and tail pulleys, etc.	378.65	
161 ft. interior framing, at \$2.22	356.40	
Idlers & idler bearings, 161 ft. at \$2.22	579.60	
1 Travelling Trippler.	680.00	2886.17

## - Motor - 20 H.P.

## \* 5. Corveyer in bottom of Rock Stock House.

36' Belt, 234 ft. 2 to 2, each, 7 ft.		
482 ft. of 36' Belt, at \$2.22	964.00	
964 rubber edging, at 21 cents	202.44	
Head and tail pulleys, etc.	378.65	
234 ft. interior framing, at \$2.22	561.60	
Idlers & idler bearings, 234 ft. at \$2.22	842.40	2949.09

## - Motor - 20 H.P.

## \* 6 Corveyer from Rock Stock House to Fine Grinding House

36' Belt, 524 ft. 2 to 2, each, 67 ft.		
524 ft. of 36' Belt, at \$2.22	1048.00	
1048 rubber edging - 21 cents.	220.08	
Head and tail pulleys, etc.	378.65	
Corveyer runway between buildings,		
238 ft., at \$9.62	2284.40	
57 ft. interior framing, at \$2.22	40.80	
Idlers & idler bearings, 524 ft. at \$3.62	918.00	
3 Belts, at \$120.22 each.	360.00	5250.33

## - Motor - 50 H.P.

Carried forward. 32456.73



## Conveyors.

Brought forward

\*7 Conveyer Top Fine Grinding Rolls.

48' Belt, 158 ft. c. to c. - 3 S' Dumps.

570 ft. of 48' Belt, at \$2.22

740' Rubber edging, at 21 cents.

Head and tail pulleys, etc.

158 ft. interior framing, at \$2.22

Rollers and idler bearings, 158 ft. at \$1.11

3 'S' dumps, at \$120.22

925.00

152.40

414.19

442.40

718.90

362.64

32426.73

3018.53

— Notes. 25 H. P.

\*8 Conveyer Bottom Fine Grinding Rolls

48' Belt, 191 ft. c. to c. - level.

296 ft. 48' Belt, at \$2.22

792' Rubber edging, at 15 cents.

Head and tail pulleys, etc.

191 ft. interior framing, at \$2.22

Rollers &amp; idler bearings, 191 ft., at \$4.22

990.00

118.80

414.19

534.80

869.08

2926.84

— Notes. 20 H. P.

\*9 Conveyer Grinding House to Screens.

48' Belt, 342 ft. c. to c. Vert. etc. 77 ft.

698 ft. 48' Belt, at \$2.22

1596' Rubber edging - 15 cents.

Head and tail pulleys, etc.

Conveyer running between buildings,

212 ft., at \$1.11

20 ft. interior framing, at \$2.22

Rollers &amp; idler bearings, 342 ft., at \$4.22

6 Bents - \$120.22

1745.00

209.40

414.19

3494.40

84.00

1556.10

720.00

8223.09

— Notes. 100 H. P.

1,000 tons.

Brought forward 46597.19

(5)

## Conveyors.

Brought forward.

\$ 46597.19

## \*10 Conveyors - Top of Sarsens.

48' Belt, 229 ft. c. to c. 2' 5" drums

572 ft. 48' Belt, at \$2.22

\$ 1430.00

1146' rubber edging, 15 cents.

171.60

Head and tail pulleys, etc.

414.19

Interior framing, 229 ft., at \$2.22

641.20

Sdles &amp; idler bearings, 229 ft., at \$4.22

1041.95

5' S' drums, at \$120.22

604.40

4308.34

## — Motor - 20 H.P.

\*11 Conveyors Return Belt Sarsens  
to Landing House.

36' Belt, 872 ft. c. to c. Belt, hie 25 ft.

1188 ft. 36' Belt, at \$2.22

\$ 2316.00

2316' rubber edging, 15 cents.

347.40

Head and tail pulleys, etc.

378.65

Conveyor runway between buildings

310 ft., at \$9.82

2976.00

262 ft. interior framing, at \$2.22

628.80

Sdles &amp; idler bearings, 272 ft., at \$3.82

2089.20

4 Belts, at \$120.22 each.

480.00

9186.05

## — Motor - 20 H.P.

600 turns per hr.

## \*12 Conveyors. Finest below Sarsens.

36' Belt, 282 ft. c. to c., incl.

518 ft. 36' Belt, at \$2.22

\$ 1036.00

1036' rubber edging, 15 cents.

155.40

Head and tail pulleys, etc.

378.65

282 ft. interior framing, at \$2.22

604.80

Sdles &amp; idler bearings, 282 ft., at \$3.82

907.20

3082.05

## — Motor - 20 H.P.

Carried forward \$ 63168.65

## Conveyors.

## Brought forward-

\* 12 Conveyors Screen to Blower House "1.

36 Belt, 263 ft. c. to c., cost lit. 39 ft. \$ 1080.00

340 ft. 36" Belt, at \$2.22 162.00

1080 rubber edging, at 15 ct. 378.66

Head and tail pulleys, etc.

Conveyor runway between buildings-

239 ft., at \$9.62 2294.00

24 ft. interior framing, at \$2.22 57.60

Idlers &amp; idler bearings, 263 ft., at \$3.58 946.80

5 Bents, at \$120.00 each. 600.00

5319.05

- Motor. 40 H.P.

\* 14 Conveyors. Top of Blower House "1.

36 Belt, 165 ft. c. to c., 3" S" drums- # 688.00

344 ft. 36" Belt, at \$2.22 108.20

688 rubber edging, at 15 ct. 378.65

Head and tail pulleys, etc.

165 ft. interior framing, at \$2.22 396.00

Idlers &amp; idler bearings, 165 ft., at \$3.58 594.00

3" S" drums, at \$110.00 332.04

2491.89

- Motor. 25 H.P.

\* 15 Conveyors Bottom of Blower House "1.

36 Belt, 166 ft. c. to c., 3" S" drums- # 692.00

346 ft. of 36" Belt, at \$2.22 103.80

692 rubber edging, 15 ct. 378.66

Head and tail pulleys, etc.

166 ft. interior framing, at \$2.22 398.40

Idlers &amp; idler bearings, 166 ft., at \$3.58 597.60

2170.46

- Motor. 15 H.P.

Carried forward

73350.02

## Conveyors

Brought forward		\$ 73350.02
*16 Conveyer. Belmont Bank #1		
to Magnetite Magnets-		
36' Belt, 367 ft. 6 to 6, rest 83 ft.		
748 ft. of 36' Belt, at \$2.22	1496.00	
1496' rubber edging - 15 cts.	224.40	
Head and tail pulleys, etc.	378.65	
Conveyer running between buildings		
327 ft., at \$9.55	3139.20	
40 ft. interior framing, at \$2.22	96.00	
Idlers & idler bearings, 2567 ft., at \$3.65	1321.20	
Bents and Transfer Tower -	720.00	7375.45

— Motor - 40 H.P. 380 tons.

*17 Conveyer. Top of Magnetite Magnets-	
36' Belt. 273 ft. 6 to 6. 7 dumps.	
700 ft. 36' Belt, at \$2.22	1400.00
1400' rubber edging at 15 cts.	210.00
Head and tail pulleys, etc.	378.68
273 ft. interior framing, at \$2.22	655.20
Idlers and idler bearings, 273 ft. at \$3.22	982.80
7 Dumps, at \$110.55	774.76
	4401.41

— Motor - 25 H.P.

*18 Magnetite Magnets to Hematite Magnets	
26' Belt. 659 ft. 6 to 6. rest 83 ft.	
1332 ft. 26' Belt, at \$1.12	1655.00
2664' rubber edging, at 15 cts.	399.60
Head and tail pulleys, etc.	349.94
Conveyer running between buildings	
343 ft., at \$8.22	2760.00
314 ft. interior framing, at \$2.22	628.00
Idlers & idler bearings, 659 ft., at \$5.22	1977.00
7 Bents - 120.22	840.00
	8619.54

— Motor - 40 H.P.

Brought forward \$ 98746.42

## Conveyors.

Brought forward \$ 93746.42

\*9 Magnetite Magnete to Belt carrying  
concentrate from Hematite Magnete  
to Blower House #2.

24' Belt, 652 ft. a to c, incl. 3 ft. -  
1318 ft. of 24' Belt, at \$1.25 1647.50

26% rubber edging, 15 etc. 395.40

Head and tail pulleys, etc. 349.94

Conveyor running between buildings -  
338 ft., at \$5.00 2704.00

314 ft. interior framing, at \$2.25 628.00

Idlers & idler bearings, 652 ft., at \$3.22 1956.00

7680.84

— Motor.. 25 H.P.

\*20 Top of Hematite Magnete -

24' Belt, 273 ft. a to c, incl. of dumps. #

700 ft. 24' Belt, at \$1.25 875.00

1400 rubber edging, at 15 etc. 210.00

Head and tail pulleys, etc. 349.94

273 ft. interior framing, at \$2.25 546.00

Idlers & idler bearings, 273 ft., at \$3.22 819.00

7 "S" dumps, at \$9.60 673.40

3473.34

— Motor.. 35 H.P.

\*21, 22, 23 Concentrates below  
Hematite Magnete -

24' Belts, 296 ft. each a to c, each. #

1818 ft. of 24' Belt, at \$1.25 2272.50

3636 rubber edging, 15 etc. 545.40

888 interior framing, at \$2.25 1776.00

Idlers & idler bearings, 818 ft., at \$3.22 2664.00

Head & tail pulleys, combination }  
for the three belts. 650.00

7907.90

— Motor.. 40 H.P.

Brought forward \$ 112808.30

## Conveyors.

## Brought forward

\$ 12 808.50

24 25 To Dump - Hematite Magnets.		
24' Belt - 810 ft. each c. to s. - 1640.		
1340 ft. of 24' Belt, at \$ 1.25	\$	1675.00
2680 rubber edging, at 15 cts.		402.00
590 interior framing, at \$ 2.00		1180.00
Idlers & idler bearings, 600 ft., at \$ 3.00		1800.00
40 ft. Conveyor outside, at \$ 3.00		320.00
Head & tail pulleys, combination for the two belts.		564.00
		6031.00

## — Motor. 25 H.P.

25 Hematite Magnets to Blower H.P. 2		
24' Belt, 429 ft. c. to s. - vert. ht. 77 ft.		
872 ft. of 24' Belt, at \$ 1.25	\$	1090.00
1744 rubber edging, 15 cts.		261.60
Head and tail pulleys, etc.		349.94
Conveyor runway between buildings		
351 ft., at \$ 8.25		2888.00
78 ft. interior framing, at \$ 2.00		156.00
Idlers & idler bearings, 429 ft., at \$ 3.00		1287.00
6 Bents, at \$ 120.00		720.00
		6672.54

## — Motor. 30 H.P. 300 tons.

27 Conveyer. Top of Blower H.P. 2		
24' Belt, 121 ft. c. to s., 2 Dampers		
289 ft. 24' Belt, at \$ 1.25	\$	361.25
538 rubber edging, 15 cts.		80.70
121 interior framing, at \$ 2.00		242.00
Head and tail pulleys, etc.		349.94
Idlers & idler bearings, 121 ft., at \$ 3.00		363.00
2 Dampers, at \$ 96.00		192.00
		1564.29

## — Motor. 30 H.P.

carried forward ————— \$ 127076.83

## Conveyors.

Brought forward-			
#28 Bottom of Blower House - 20			\$ 27076.33
24' Belt, 2 1/2 ft. a. to c., rest 3 1/2 ft. 7 ft.			
442 ft., 24' Belt, at \$1.25		\$5260	
884 - rubber edging, at 15 cts.		132.60	
214 - interior framing, at \$2.00		428.00	
Head and tail pulleys, etc.		349.94	
Idlers & idler bearings, 214 ft., at \$3.25		695.00	2145.04

— Motor. 15 H.P.

#29 Blower House - 2 to			
Concentrate Stock House:			
24' Belt, 780 ft. a to c, level.			
1574 ft. 24' Belt, at \$1.25		1967.50	
3148 ft rubber edging, at 15 cts.		472.20	
Conveyor runway between buildings,			
780 ft., at \$8.25		6420.00	
Head and tail pulleys, etc.		349.94	
Idlers & idler bearings, 780 ft., at \$3.25		2540.00	
10 Bents, at \$100.00		1000.00	12369.64

— Motor. 25 H.P.

#30 Conveyor in Roof of			
Concentrate Stock House:			
24' Belt, 161 ft. a to c, level.			
326 ft. of 24' Belt, at \$1.25		420.00	
672 - rubber edging, at 15 cts.		100.80	
161 ft interior framing at \$2.00		322.00	
Head and tail pulleys, etc.		349.94	
Idlers & idler bearings, 161 ft. at \$3.25		483.00	
Trussing timber.		652.00	2325.74

— Motor. 25 H.P.

Carried forward.

243876.78

## Conveyors.

Brought forward-  
 \*31+\*32. Returns to Magistrate Magistrate,  
 to meet incoming ore.  
 24' Belts, 50 ft each, 2 to 2, rest 10 ft.  
 2056 ft. of 24' Belt, at \$1.25 2570.00  
 4112' rubber edging, at 15 cents 616.80  
 Head + tail pulleys, connected. 564.00  
 Conveyor running between buildings,  
 435 ft., at \$8.22 3440.00  
 584 ft. interior framing, at \$2.22 1168.00  
 1014 ft. rollers + idler bearings, at \$2.22 2042.00  
 8 belts, at \$120.22 960.00 12360.80

— Motor. 40 H.P.

Motor Housing. 28 at \$20.22 each 560.00 560.00

Total 156797.88



# Magnetite Magnets.

160 sets of 3 high.  
 80 " " 6 " "  
 960 Magnets - 300 lbs. each -  
     288,000 lbs., at 2.      \$ 11 520.00  
     Copper - 76,800 " " 20.      15360.00

Angle iron framework, chutes, etc.  
 for the 160 sets of 3 high -  
     176,000 lbs., at 2.      3520.00

Angle iron framework, chutes, etc.  
 for the 80 sets of 6 high -  
     407,560 lbs., at 2.      8147.20

Labour on      288,000 lbs.      at 2.      5760.00  
     "      383,360 "      at 2.      11,667.20

Labour, winding 960 Magnets, at \$1.      960.00  
     \$ 36934.40      \$ 6934.40

- Motor.      See motor list.

No erection

*Hematite Magnets.*

256 bits of 20 high.

5120 Magnets 300 lbs. each.

1,536,000 lbs., at \$ 61440.00

Copper - 409,600 " at 22 81920.00

Angle iron in framework,  
sheets in shutters, etc.

1,020,416 lbs., at 2 20408.32

Labor on 1,536,000 lbs.

at 2 30720.00

" " 1,020,416 "

at 2 20408.32

Labor, winding 5120 Magnets, at 2 10240.00

\$228136.64 \$228136.64

— Motor.

See motor list.

No section.

## Motors.

Wrist for Crusher Plant.	150 H.P.
First Set 5 ft. Roller.	60 "
Second . . . .	80 "
Third . . . .	100 "
Fourth & Fifth . . - 100 H.P. each	200 "
Top Roller Feed.	50 "
Bottom . . . .	10 "
Chute Top.	10 "

6 Fine Grinding Rolls - 120 H.P. each 900 H.P.

- Drying House:	
Exhaustors. 2 - 25 H.P. each.	50 H.P.
Furnace Blower.	15 "
Chucker Mechanism.	2 - 5 H.P. each
- Rock Stock House:	
Exhaust Fan.	25 H.P.
- Screen House:	
Roller Feeds.	6 - of 15 H.P. each 90 H.P.
- Blower House #1.	
Blowers. 16 - of 5 H.P. each.	80 H.P.
- Blower House #2.	
Blowers. 12 - of 5 H.P. each.	60 H.P.
Air Compressor, at mine.	130 "

4 Scraper Conveyors. - 25 H.P. each 100 H.P.

All Belt Conveyors - see list. 935 H.P.

Motors — 3,030 H.P.

Light Dynamos.	120 H.P.
Press . . . .	3030 "
Magnetite Magnets.	75 "
Hematite . . . .	750 "
	<u>4,005 H.P.</u>

Large 4,000 H.P. Dynamo, at \$16.25 64,000.00

3,000 . . Motors . \$18.00 54,000.00

\$118,000.00 \$118,000.00

## 24', 36' and 48' Belt Conveyors.-

Head and Tail Pulley  
for 24' Belt Conveyor.

Cast iron	2-240 lbs. 24	\$ 56.28
Steel shafting (4 7/8" x 2 1/2")	426 - 3	12.78
Bolts, rods, etc.	135 - 2 1/2	3.71
Maple stones.		2.70
Spur Gears.		48.00
2-2 1/2" Bearings, complete, at \$12.25		24.56
2-3 1/2" " " " " at \$14.00		28.04

Head and Tail Pulley.		
Cast iron	1094 lbs. 24	27.35
Steel shaft.	237 - 3	7.11
Bolts, rods, etc.	100 - 2 1/2	2.75
Maple stones.		2.70
2-3 1/2" Bearings, complete, at \$14.00		28.04
Labour on 4228 lbs at 2.5		106.95
		<u>349.94</u>

Head and Tail Pulley  
for 36' Belt Conveyor. # 378.60Head and Tail Pulley  
for 48' Belt Conveyor. # 414.89

Above does not include  
cost of erection.-

## 24', 36' and 48' Belt Conveyors.

Cost per lineal foot of 24'-  
including Idler Bearings, Angle Rises,  
Idlers and Vertical Idlers.

On 30 ft. length.

20-1½" shafts.	240 lbs. at 3.	7.20
40 Spindles.	360 " " 3.	10.80
40 Bearings.	360 " " 4.	14.40
Bolts and Pins.		8.60
Maple Staves.		7.20
Chains and Packing.		4.20
120 Oil Plugs.		6.00
Labor on 960 lbs., at 3.		28.80
2 Vertical Idlers.		
Cast Iron.	70 lbs. at 4.	2.80
Steel Spindles.	6 " " 3.	.18
Bolts.		.25
Cast Iron Blocks. 12 lbs., at 3.		.36
Labor on 88 lbs., at 4.		3.52
4 Plugs.		.20
		<u>\$87.61</u>

24' Say \$3.22 per ft.

36' " \$3.22 " " "

48' " \$4.22 " " "

Cost of erection not included.

2" Dumps in Belt Conveyors-

24', 36' and 48' Belts-

For 24' Belt:

1 Shaft.	168 lbs., at 3	\$ 5.04
Spiders.	220 " - 2 1/2	5.50
Bolts.		1.35
Maple .65 ft., at \$30.00		1.95
2-2 1/2" Bearings, complete, at \$12.00		24.00
Labor on 388 lbs., at 2.5		9.70
		<u>\$48.10</u>
2 Shafts, etc.		<u>\$ 96.20</u>

For 36' Belt:

1 Shaft.	220 lbs., at 3.	\$ 6.60
Spiders.	220 " - 2 1/2	5.50
Bolts.		1.35
98 ft. Maple, at \$30.00		2.85
2-3 1/2" Bearings, at \$14.00, complete.		28.00
Labor on 440 lbs., at 2.5		11.00
		<u>\$55.30</u>
2 Shafts, etc.		<u>\$110.60</u>

For 48' Belt:

1 Shaft.	265 lbs., at 3.	\$ 7.95
Spiders.	220 " - 2 1/2	6.25
Bolts.		1.55
125 ft. Maple, at \$20.00		2.50
2-3 1/2" Bearings, at \$14.00, complete.		28.00
Labor on 516 lbs., at 2.5		12.90
		<u>\$60.44</u>
2 Shafts, etc.		<u>\$120.88</u>

9' Scraper Conveyors - Blower House.

1 Head and 1 Tail Pulley:		
Iron Casting.	2,000 lbs., at 2 $\frac{1}{2}$	\$ 50.00
Channels, single iron,		
Sheet Steel, str. 2,935 lbs., at 2.		58.70
Shafting. 7.0 lbs., at 3.		21.30
Pin - 520 - - 2.		10.40
Gears.		120.00
2-2 $\frac{1}{2}$ " Bearings, at 12 $\frac{1}{2}$ , complete.		24.56
4-3 $\frac{1}{2}$ " " " 14 $\frac{1}{2}$		56.08
Labor on 6267 lbs., at 2.		125.34
		<u>\$466.43</u>

9' Scraper Conveyors cost \$9 $\frac{1}{2}$  per lin.  
ft., including rope, rope clamps,  
clamp bolts, rollers, wheels, blades,  
rail, etc. -

2 Conveyors in Blower House <sup>1</sup> ,		
each 198 ft. long		
2 Head and 2 Tail Pulleys.		\$932.86
Conveyor, 396 ft., at \$9 $\frac{1}{2}$		3793.68

2 Conveyors in Blower House <sup>2</sup> ,		
each 154 ft. long		
2 Head and 2 Tail Pulleys.		932.86
Conveyor, 308 ft., at \$9 $\frac{1}{2}$		2950.64

2 Motor Mountings, at \$20 $\frac{1}{2}$

40.00	
<u>\$8,650.04</u>	<u>\$8,650.04</u>

Motors - see motor list.

# Dryer House-

## 2 Druggers:

Plates in sides, etc., bottom chute, furnace castings, shaker and distributor plates. 285,000 lbs., at 2.	#	5700.00
Castings, machined. 12,240. - 2.		306.00
Machined work 12,240. - 2.		367.20
Sheet steel and angles. 19,520. - 2.		390.40
Labor on same. 19,520. - 2.		390.40
Shafting. 8,636. - 2 1/2		237.69
Machined work. 8,636. - 2.		259.08
Stack and tank steel-17,000. - 2.		340.00
Labor on same. 17,000. - 2.		340.00
Rope Clamps. 150. - 2.		4.50
Labor on same.		10.00
12 Screens.		36.00
Bolts.		267.86
Orbital in joints.		54.00
2 Dust Chutes, with stack & chute: 9000 at 2.		180.00
Labor on same. 9000 lbs. at 2.		180.00
2- 80' Exhaustors. (Buffalo)		410.00
1 Blower for Furnace.		110.00
2 Pyrometers, with furnaces.		100.00
44,000 Fire Brick, at \$2.35		1012.00
25,000 Red " " \$2.25		200.00
Foundation Bolts. 260 lbs., at 3.		16.80
Firing tools.		18.00
	\$	10929.93
	\$	10929.93
5 Dust Drawings for Motors, at \$2.00	100.00	100.00
		\$ 11,029.93

## Creation.

— Motors. see list.

- 2- 25 H.P. for exhaustors.
- 1- 15 H.P. " blower for furnace.
- 2- 5 H.P. " shaker mechanisms.



Rock Stock House.

1 Panel:

7 Chutes, with Gates, at \$40.00

\$ 280.00

3 Panels -

\$ 840.00

Erection.

Furnace for Rock Stock House:

Castings -

5,000 lbs. at 2 1/2¢

\$ 125.00

Bolts, rods, etc.

400 " " 2¢

8.00

20,000 Red Brick, at \$3.50

160.00

4,000 Fire " " \$23.00

92.00

Firing Tools.

12.00

Exhaust Fan.

40.00

\$ 847.00

847.00

Duct Housing, for Motor.

20.00

\$ 1707.00

— 1-25 H.P. Motor, for Fan.

See motor list.

Erection.

## Grinding House-

## 6 Sets of Fine Grinding Rolls-

1 Set of Rolls-Machine proper-		
Gray Iron Castings- 67,033 lbs. at 24	1676.38	
Chilled Plates- 2,968 - - 32	96.46	
6 Facing Rolls- 7,050 lbs. at 110.00	660.00	
Bronze Castings- 872 lbs. at 22	192.16	
Brass- 25 - - 22	5.50	
Hammered Iron Shafts- 15324 - - 48	609.38	
Steel Shafts- (3 1/2") 140 - - 3	4.20	
P.O. & Special Rollbit- 845 - - 26	219.70	
Steel keys, turned bolts etc. 1130 - 3	33.90	
Bolts, rods etc. 710 - 22	19.33	
	\$ 3498.41	
Labour on 96,123 lbs. at 22	4998.30	\$ 8596.91
Foundation plates- 12,260 lbs. at 2 1/2	337.15	337.15

## Tightening Service:

Gray Iron Castings- 3,868 lbs. at 24	\$ 96.70	
Bronze- 180 - - 22	39.60	
Brass- 9 - - 22	1.98	
Steel Shafts (3 1/2") 225 - - 3	6.75	
32 ft. 9" channels } 571 - - 3	11.42	
25 - 4" - - - - -		
Steel keys, dowels, etc. 30 - - 3	.90	
Bolts, rods, etc. 263 - - 2 1/2	7.33	
	\$ 164.38	
Labour on 5146 lbs. at 22	267.59	\$ 432.17
350 ft. Nine Rope, at 12	42.00	
	\$ 9408.23	
6 Rolls----		\$ 56,449.38

## Grinding House.

## 6 Sets of Fine Grinding Rolls.

Each mechanism, and shafts above and below rolls, for 1 set:

Grey Iron Castings	1762 lbs., at 2 1/2	\$ 44.05
Collets	38 " " 38	1.89
Bronze	9 " " 10	1.98
Steel Shafting (2 1/2)	216 " " "	6.48
50 ft. 6" diameter.	} 2208 " " "	44.16
12 " 6"		
Angles & Steel Plates.		
Steel keys, turned bolts etc.	11 " " "	.33
Bolts, nuts, rivets etc.	178 " " 38	4.90
Lipchests and Chains.		13.00
4. 2 1/2" Bearings complete.	at \$10.22	40.92
Labor on	44 + 2 lbs., at 4	177.68
		\$ 334.79

## 6 Rolls.

\$ 2008.74

6 Fine Grinding Rolls, including tightening mechanism, shafts above and below machine, feed rolls, and feed roll mechanism:

\$ 58,458.12

6 Motor Housings. at \$20.22

120.00

\$ 58,578.12

— 6 Motors each 150 H.P. see list.

— Creation —

## Screens -

1132 screen plates, arranged in  
6 groups. Each group containing 32  
bricks and each brick 4 sets  
6 high - making 192 sets -

Cast iron hoppers and gates and  
screens for roller feed - 192 in number  
hoppers 8'0" long - 370 lbs each - (no  
machine work) - 71,040 lbs. at 2¢ \$ 1776.00  
1744 ft. 10" pipe at 2¢ less 607¢ (33,760 lbs) 2419.20  
192 G.D. pipe ends. 3,840 lbs. at 2¢ 96.00  
36 " " stands. 2,880 " " 2¢ 72.00  
660 ft. 2 7/8" shafting. 10,464 " " 2¢ 260.70  
6 sets of pump timing, at \$26.00 216.00  
48 " Motors . . . \$10.00 480.00  
180 - 2 7/8" Bearings, at \$10.00, complete. 1814.40  
Chutes above and below each group  
of screens of 1/4" sheet iron in the  
form of 21 pipes:  
4870 - 6 59,200 lbs. at 2. 1184.40  
1132 screens, at 80 cents each 976.00  
Screen Frames. 46,080 lbs. at 2. 921.60  
Screw bases. 190 lbs. at 2. 9120 " " 2¢ 228.00  
240 " - 6. 1,440 " " 2¢ 36.00  
Labor on 10,360 " " 2. 316.80  
176,208 " " 2. 3524.16

6 Direct Drivings for Motors, at \$300

\$ 9000  
\$ 14011.26 \$ 14011.26

— 6 - 15 H.P. Motors - see motor list.

— No erection —

## Blower House #1.

## 32 Blowers:

## For 1 Blower:

Sheet Steel & Angles.	1411 lbs. at 2	\$ 28.22
Blades.	335 . . . 2	670
Castings. Blade Centers.	108 . . . 25	270
Plate. Sheet Steel.	579 . . . 2	1158
Bearings. 3 at \$7.25		35.00
Brackets. Cast Iron.	180 . . . 25	450
Hanger.	" . . . 70 . . . 25	1.75
Gears.		20.38
Gear Cases. Cast Iron.	40 . . . 25	1.00
Steel.	310 . . . 2	6.20
Shafting.	180 . . . 2	5.40
		<u>123.40</u>
Labor on 3213 lbs. at 2.		96.39
		<u>\$219.79</u>

## 1 Bin:

Sheet Steel & Angles.	1585.2	
" " " Air Pipe.	1016.2	
" " " Post Blowers.	650.2	
" " " Chute Sides.	1609.2	120.00
" " " " "	40.2	
" " " Hopper.	590.2	
Cast Iron Connections.	175.25	
Hopper.	370.25	
Sheet Steel & Angles at each 5' drop.	500.2	1350
Cast iron at each "5"	75.25	
120 yds. sheeting, at	1	9.60
Labor on 6613 lbs. at	3	<u>198.30</u>
		<u>\$343.40</u>

1 Bin, Blower, Air Pipe and  
Connecting Chutes - \$363.19

32 Bins, at -

16 Motor Houseings, at \$15.25

\$18022.08

240

\$18,262.08

- 16-5 H.P. Motors - see motor list.

Erection -

## Blower House #2.

24 Blowers:

1 Bin, Blower, Air Pipe and  
Connecting Pipes #262.19

24 Bins.

\$ 13,516.56

12 Motor Houseings, at \$1,500

18000

\$ 13,696.56	\$ 13,696.56
--------------	--------------

— 12.5 H.P. Motors - see motor list.

Erection.

## Bearings:

Standard, with Oil Pockets &amp; Bolts:

2 $\frac{7}{16}$ :			
Cast Iron, 75 lbs. wt	3	\$ 2.25	
Babbitt - Special, 3 lbs. wt	30	90	
Steel down pin - 1 lb.	10	10	
N. D. Bolts - 6 lbs. wt	4	24	
1 Chain.		06	
Packing.		00	
3 Pipe Plugs, wt	5	15	
Labor - \$3.62 net, add 40% + 25%		6.73	\$ 10.08

2 $\frac{9}{16}$ :			
Cast Iron, 116 lbs. wt	3	\$ 3.48	
Babbitt - Special, 4 lbs. wt	30	1.20	
Steel down pin - 1 lb.	10	.10	
N. D. Bolts - 9 lbs. wt	4	.36	
1 Chain.		.09	
Packing.		.08	
3 Pipe Plugs, wt	5	.15	
Labor - \$3.95 net, add 40% + 25%		6.82	\$ 12.28

3 $\frac{1}{2}$ :			
Cast Iron, 136 lbs. wt	3	\$ 4.08	
Babbitt, 6 lbs. wt	30	1.00	
Steel down pin - 1 lb.	10	.10	
N. D. Bolts - 11 lbs. wt	4	.44	
1 Chain.		.15	
Packing.		.10	
3 Pipe Plugs, wt	5	.15	
Labor \$4.12 net, add 40% + 25%		7.20	\$ 14.02

1 $\frac{1}{2}$ :			
Bearing, complete, on above piece -		\$ 7.00	\$ 7.00

## Dunderland Summary.

12-30-01.

## Structural Work-Houses:

Crusher House.	85 tons.
Binders in Crusher House.	82 "
Trestle Approach & Extension.	102 "
Dryer House.	106 "
Rock Stock Hs. & Furnace Hs.	143 "
Fine Grinding House.	198 "
Screen House.	295 "
Blower House #1.	210 "
Magnetite Separator Hs.	435 "
Hematite " "	530 "
Blower House #2.	162 "
(15,000 tons capacity) Concentrate Stock Hs.	125 "
Coal Stock House.	40 "
Engine House.	80 "
Boiler " "	80 "
Store House.	60 "

2730 Tons erected at \$75.25 \$204,750.00 \$204,750.00

Corrugated Covering 18" x 24" 51,357.00

Excavation - 20,626 cu. yds. at \$2.52 51,581.50

Dry Wall. 2800 cu yds. at \$1.52 4200.00

Concrete. 3,505 cu yds. at \$2.82 10315.00

Heavy Masonry } 8800 cu yds. at \$2.22 14500.00 56,793.50  
Crusher Plant }

Carried forward \$290,502.50



## Dunderland Summary.

1230.01-

Brought forward.

\$290503.50

## Machinery:

Giant Rolls, 7' x 7'

5 sets 5' x 5' Rolls.

Hutch.

Tipping Mechanism.

Roller Feeds.

Hoppers.

Steam Plant for Driving

Giant Rolls - 150 H.P.

Crushing  
Plant.

\$69221.50

3000.00

Dryer House.

11029.93

Rock Stock House.

1707.00

Fine Grinding Rolls.

58578.82

Screen House.

14011.26

Blower House #1.

18262.08

Magnetite Magnets.

56934.40

Hematite

25136.64

Blower House #2.

13696.56

Conveyors - Conveyors to Conveyors

1500.00

Belt + Scraper Conveyors,

165447.39

including runways + belts.

Motors. 3000 H.P., at \$18.22

54000.00

Engines. 4000 . . . \$16.22

64000.00

Steam Plant. 4000 H.P.

14000.00

Ciling System.

2000.00

Heating

8000.00

Electricity

18000.00

Conveyors to Dumper (2)

2500.00

4 Steel Chocks, at \$10,000 each.

40000.00

35-36" Rock Drills, at \$250 each.

8750.00

Nine Leafrollers.

3000.00

50 Mine Shovelers, at \$160 each.

8000.00

50 " " " " " " " " " " " "

1750.00

Two Air Compressors (Motor driven)

6000.00

Small Machine Shop.

2500.00

Erection of Machinery, 2 to 4 per lb.

9712240

\$1097,148.48

1097,148.48

Total.

\$1017651.98-

Add for Storage &amp; Spillage - \$30,000

(not 000.01)  
plus 0.0001

Mr. Edison:

On this estimate for the Dunderbond Plant I have been guided as far as possible by the cost of similar material furnished to Stewartville taking into account where possible the actual cost of machine work at Stewartville, adding to same 40% + 25% as set forth in detail in sheets herewith.

The Conveyor Runways have been calculated at 5 cents per pound erected, allowance being made for a walkway on one side of conveyor belt only.

Five Grinding Rolls are figured at cost as built in Laboratory, Abrasive Machine, 5 ft. Rolls, Hoppers, etc. in Crusher Plant are figured at 5 cents per pound, complete, but not erected.

Structural Work (Houses) is figured at \$75.00 per ton erected, and similar houses at Stewartville taken as a basis of calculation - 12 1/2 % of being added to same.

The amount added for erection of Machinery in houses I have put at \$97,125.00, which is 1/2 cent per pound.

No allowance has been made for freight, duties, lumber in stains & floors, R.R. tracks in the Plant proper, coal handling from R.R. to coal store, & water for boilers and engines.

This estimate is based on handling 5000 tons of ore every 20 hours, & has not in view future extensions. No separate Stock House has been provided for Magnetite Concentrate, as under the plan it mixes with the Hematite Concentrate before entering the Blower House on its way to the Stock House.

Should say this plant could not be erected for less than \$1,400,000.00 -

# Brigetting Plant - Mo.

61  
12/21/01-

## Conveyors:

### #1. Coal Dump to Stock House:

36" Belt, 600 ft. c. to c., incl. ht. 56 ft.	
12 1/2 ft. of 36" Belt, at \$2.22	2430.00
2430. rubber edging, at 12 ft.	363.50
Head and tail pulleys, etc.	378.65
Conveyor running between buildings,	
424 ft., at \$9.88	4070.04
Interior framing, 176 ft. at \$2.22	422.40
Idlers, idler bearings, etc. 600 ft. at \$1.10	2160.00
5 Bents, at \$12.00	600.00
1 Travelling Trippe	680.00
	11105.95

— Motor - 75 H.P. (500 tons per hr.)

### #2. Belt under Stock House:

36" Belt, 250 ft. c. to c., level.	
513 ft. of 36" Belt, at \$2.22	1030.00
1030. rubber edging, at 15 ft.	154.50
Head and tail pulleys, etc.	378.65
Interior framing 250 ft. at \$2.22	600.00
Idlers & idler bearings 250 ft. at \$3.60	900.00
	3063.15

— Motor. 20 H.P.

### #3. Stock House to Dryers

36" Belt, 350 ft. c. to c., incl. ht. 25 ft.	
715 ft. of 36" Belt, at \$2.22	1430.00
1430. rubber edging, at 15 ft.	21450
Conveyor running between buildings,	
324 ft., at \$9.88	3216.00
Interior framing - 15 ft. at \$2.22	36.00
Head and tail pulleys, etc.	378.65
Idlers, bearings, etc. 350 ft. at \$3.22	1260.00
7 Bents, at \$12.00	840.00
	7372.15

— Motor - 40 H.P.

(300 tons)

Carried forward

21844.25

(4)

## Brigetting Plant - Mo.

Brought forward

\$ 21544.25

## #4 Scraper Conveyor - Dryer to Mixer:

110 ft. Centre to Centre -

Head and tail pulleys

\$ 466.43

Entire framing, 110 ft. at \$3.22

418.00

110 ft. Conveyor, at \$9.58.

1053.80

1938.23

- Motor - 20 H.P. -

## #5 Return Belt to Bin at Dryer:

24' Belt, 115 ft. c. to c., vert. ht. 12 ft.

245 ft. of 24' Belt, at \$1.22

\$ 300.25

490' rubber edging, at 15¢.

73.50

Head + tail pulleys, etc.

\$ 349.94

Entire framing, 115 ft. at \$2.22

255.00

Idlers + idler bearings, 115 ft. at \$3.22

\$ 345.00

1804.69

- Motor - 20 H.P. -

## #6 Mixer to Cooler:

24' Belt, 165 ft. c. to c., 25 ft. vert. ht.

344 ft. of 24' Belt, at \$1.22

\$ 431.25

690' rubber edging, at 15¢

103.50

Head + tail pulleys, etc.

\$ 349.94

Runway bet. bldgs. - 40 ft., at \$8.22

560.00

Entire framing, 95 ft. at \$2.40.

228.00

Idlers + idler bearings - 165 ft. at \$2.22

495.00

1 Belt.

120.00

2287.69

- Motor - 20 H.P. -

## #7 Cooler to Brickery

24' Belt, 40 ft. c. to c., vert. ht. 8 ft.

95 ft. of 24' Belt, at \$1.22

\$ 117.75

190' rubber edging, at 15¢

28.50

95' entire framing, at \$2.22

228.00

Head and tail pulley, etc.

\$ 349.94

Idlers + idler bearings, 40 ft., at \$2.22

120.00

845.19

- Motor - 10 H.P. -

brought forward

\$ 27920.05

## Brigetting Plant - No.

12/31/1901.

## Conveyors.

## \*1. Con. Dump to Stock House.

36' Belt, 600 ft. c. to c., vertical height 80 ft.

12 1/2 ft. of 36' Belt, at \$1.25 2 430.00

2420' of rubber edging, at 18 cts. 384.30

Head and tail pulleys, etc. 370.00

Conveyer running between buildings:

424 ft., at \$1.00 407.60

Interior framing 176 ft., at \$2.25 422.40

Idlers, idler bearings, etc., 600 ft., at \$2.25 2 160.00

5 Bents, at \$120.00 600.00

1 Trussing Trispher. 610.00

11 108.90

— Motor. 75 H.P.

(300 tons per hr.)

## \*2. Belt under Stock House.

26' Belt, 290 ft. c. to c., level.

515 ft. of 26' Belt, at \$1.25 642.75

1030' ft. of rubber edging, at 18 cts. 184.80

Head and tail pulleys, etc. 349.94

Interior framing 280 ft., at \$2.25 500.00

Idlers, idler bearings, etc., 280 ft., at \$2.25 780.00

2 398.19

— Motor. 20 H.P.

## \*3. Stock House to Dryer.

24' Belt, 380 ft. c. to c., vert. height 80 ft.

715 ft. of 24' Belt, at \$1.25 892.75

1430' ft. of rubber edging, at 18 cts. 254.80

Conveyer running between buildings:

335 ft., at \$1.25 2 610.00

Interior framing, 135 ft., at \$2.25 300.00

Head and tail pulleys, etc. 349.94

Idlers, idler bearings, etc., 350 ft., at \$2.25 1 050.00

7 Bents, at \$120.00 840.00

6 058.19

— Motor. 30 H.P.

125 tons.

Carried forward 19 562.33.

## Brigetting Plant.-Mo.

Brought forward-

\$ 19562.33

## #4 Scraper Conveyor. Dryer to Mixer.

110 ft. Centre to Centre:

Head and Tail Pulleys, etc.

\$ 466.43

Interior framing, 110 ft. at \$3.22

418.00

110 ft. conveyor, at \$9.22

1053.80

1938.23

- Motor - 20 H.P.

160 tons-

## #5 Return Belt to Bin at Dryer:

24" Belt, 115 ft. c. to c., vert. height 15 ft.:

30 625

245 ft. of 24" Belt, at \$1.22

73.90

490 ft. of rubber edging, at 15 cts.

349.94

Head and tail pulleys, etc.

270.00

Interior framing, 115 ft., at \$2.22

342.00

1904.69

Idlers etc. 115 ft., at \$3.22

- Motor - 20 H.P.

160 tons-

## #6 Mixer to Cooler:

24" Belt, 165 ft. c. to c., vert. ht. 25 ft.:

411.25

245 ft. of 24" Belt, at \$1.22

103.80

690 ft. rubber edging, at 15 cts.

349.94

Head and tail pulleys, etc.:

560.00

Runway let, idlers, 70 ft., at \$3.22

190.00

Interior framing, 95 ft., at \$2.22

495.00

Idlers + idler bearings, 165 ft. at \$3.22

120.00

2249.69

- Motor - 20 H.P.

125 tons:

## #7 Cooler to Drishers:

24" Belt, 40 ft. c. to c., vert. height 8 ft.:

118.75

95 ft. of 24" belt, at \$1.22

28.40

195 ft. of rubber edging at 15 cts.

80.00

40 ft. interior framing, at \$2.22

349.94

Head and tail pulleys, etc.

120.00

Idlers + idler bearings, 40 ft. at \$3.22

697.19

- Motor - 10 H.P.

(2) Carried forward

\$ 25752.15

## Brigetting Plant.. Mo.

Brought forward.

\$ 25752.12

## \*8 Scraper Conveyors over Brickers.

2 - each 300 ft. c. to c. -

2 Head and tail pulleys, etc.

Interior Framing, 600 ft. at \$3.00

600 ft. Conveyors, at \$9.25

932.86

2280.00

5748.00

8960.86

— 2 Motors. 30 H.P. each - 60 H.P. -

## \*9 Return Belt under Brickers:

24" Belt, 400 ft. c. to c., west ht. 13 ft.

8 1/2 ft. of 24" Belt, at \$12.25

1630 ft. rubber edging, at 15 cts.

Head and tail pulleys, etc.

Runway between bldgs., 80 ft. at \$8.25

Idlers &amp; idler bearings, 200 ft. at \$3.25

1 Rest and Transfer Tower.

Interior framing, 320 ft. at \$2.25

— Motor - 15 H.P.

40 tons.

1018.75

244.50

349.94

640.00

1200.00

648.00

640.00

4738.19

## \*10 Return to Scrapers above Brickers:

24" Belt, 100 ft. c. to c., west ht. 15 ft.

2 1/2 ft. of 24" Belt, at \$12.25

430 ft. rubber edging, at 15 cts.

Head and tail pulleys, etc.

Runway between bldgs., 80 ft. at \$8.25

Interior framing, 20 ft. at \$2.25

Idlers &amp; idler bearings, 100 ft. at \$3.25

1 Rest —

268.75

64.50

349.94

640.00

40.00

300.00

120.00

1783.19

— Motor - 15 H.P. -

Brought forward.

\$ 41234.57

# Bricketting Plant - Mo

## Motors:

Furnace Drive (Buckets in Over)	50 H.P.
8 Mixers. <sup>20 H.P. each.</sup>	160 "
Screw Conveyors at Mixers.	25 "
72 Brickbats.	40 "
Exhausters for 36 Furnaces. 5 H.P. each.	180 "
Furnace Blower.	60 "
Exhauster top of Dryer.	10 "
Fan House.	20 "
Self feeders. Rider Houses.	15 "
Foundry.	10 "
Machine Shop.	75 "
Smith Shop.	10 "
Belt & Lumper Conveyors.	225 "
Bucket Conveyors back of Furn. in.	25 "
to Rider House.	30 "
over Drive.	40 "
	<hr/> 1035 H.P.

1035 H.P. Motors, at \$12.22 per H.P.

12,638.00

1035 H.P. Generators. Power. } at \$16.22  
100 " " " " Light. }

16,160.00

Mining and electric appliances -

7,000.00

Oiling system -

1,000.00



# Brigetting Plant: Mo.

## Summary:

### Structural (Houses):

Mixer House.		88 tons.
Muck	"	32 "
Dryer	"	87 "
Stack	"	128 "
Engine	" (5000 tons cap)	66 "
Boiler	"	66 "
Foundry & Forge		39 "
Crusher & Wash House.		413 "
		<hr/> 916 tons.

916 Tons, at \$75<sup>00</sup> per ton erected - \$ 68,700.00

Corrugated Iron, Windows & Doors. - 20,437.00 \$ 39,137.60

Excavating, 8677 cu yds., at 23 cts. 2169.23

Dry Mulk, 767 " " " \$1.22 1135.50

Concrete, 2170 " " " \$3.22 6510.00 9814.73

Machine Shop, Office and Store,  
Oil House. - Wood, covered  
with corrugated iron. } 16,000.00

Oil Store. 600.00

1035 H.P. Motors, at \$18<sup>00</sup> 18630.00

1135 H.P. Generators, at \$16<sup>00</sup> 18160.00

Mining & Electric Appliances. 7000.00

Oiling System. 1000.00

Heating " 4000.00

(18) carried forward. \$164,341.73

# Brigetting Plant - Mo.

Summary:	Brought forward—	\$164,341.75
Scraper & Belt conveyors—		41,234.27
3 Bucket conveyors.		12,677.54
concentrate Duffpounder bars.		1040.00
72 Brickers, at \$1000.00 each—		72000.00
36 Ovens, including furnaces, convey. in ovens, etc.—		48892.68
Steam Plant, 1200 H.P.		42000.00
8 Mixers, Complete Kettles.		30240.00
		1500.00
36 Exhausters, with drive and pipe connections.		6600.00
1 Large Blower.		300.00
1 Dryer, with exhauster, etc., complete.		4860.00
Equipment for Machine Shop, Smith Shop, & Foundry.		15000.00
Erection—		22652.39
Total		<u>\$463,239.73</u>

4 Legs	38 888	
2 Dies -	34 25	
2 Binders	47 875	
2 Dies -	63 50	
Bolts for the above	370	978 20
4 Pillow Blocks	46 356	
4 Bushings	40 92	
2 Filler Dies -	63 08	
4 Green Cup Covers	456	
4 " " Saddles -	160	
Bolts for Bushings	1200	
Bolts for Bolting & Binders	660	59 432
2 Mandrell without Shafts	59 240	
Plates for 2 Rolls	24 290	
Bolts for Plates	1374	54 904
2 Pulleys -	11 550	
2 Frictions Complete	4 250	
Bolts for Pulleys	200	16 000
2 Shafts	16 690	
4 Bolts	59 66	
16 Nuts for same	19 39	
8 Washers -	168	24 783
2 Thrust Bearing	10 62	
4 Inside Oil Casings -	605	
2 for Pulley ends	220	
Bolts for Thrust Bearing	140	
Bolts for the above	240	22 67
Steel Hopper	24 358	
2 Steel Check Plates	97 37	24 987
Total		309 273

4/2/07 2

504293

Roller Fed.	
3 Sections.	
2 Bearings.	8400
1 Worm Casting	740
Brackets and Caps	270
1 Worm Wheel and Worm	335
1 Pair of Miter Gears	755
4 Spld. Collars	110
2 3/4 Pillow Blocks	360
2 2 1/2 "	
1 Feed Roll Shaft	1310
1 Worm shaft.	75
1 Rick Shaft.	100

Steel Frames over Rolls. 40794 362793 pounds.  
Total Weight.

Pillow Blocks.	59432
Wand rolls.	84944
Bulley.	16000
Shaft & Bolls.	24773
Skirt Bearing, -	2267
	187386

Castings for Giant Path *Exhibit 17.*

## Foundation Castings.

4 Legs Pat Nos	1-1558	9400#	
	1-1557	9475	
	1-1556	9675	
	1-1555	9650	
		38200#	
Price - of Castings			\$820.20
Machine Work on Base			110.00

1 Cross in North Side Pat	1552 - 2700#	
1 " " South "	1551 - 2625#	
1 " " East Side	254 23975	
1 " " West Side	1288 23600	
2 - Girder Ends		2350

Price of Castings	1571.00
Machine Work	300.00
from Bill of Casting Dept. Co. 22	

40 Foundation Plates Pat 1567	4205#	
Price		71.40

2 Chucks Pat 1247	9737#	422.55
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## Steel Hopper.

1. Steel Casting Pat 2854	7760#	
1 " " " 2855	7760	
1 " " " 2852	7230	
1 " " " 2853	7600	
		\$1280.55

4 Pillow Block	1014	46156
2 " " " 1570		4092
2 " " " 1015		6308
7 Grease Cup Saddles	1011	160
4 " " Covers	1017	486

## Machine Work

		1257.78
		571.72
2 Hurst Bearing	978#	
2 " " " 114		
4 Oil Packing -	605	
2 Oil Packing - for Pully	220	42.35
Machine Work		31.38

(2)

2- Pulleys 11550\*

2 Spiders for Friction 2994 2000\* 85.00  
 Friction Ring 2995 1860 10.10  
 Macph. Mark- 77.79  
 1. Idler Pulley 48 x 29 x 775\* 31.90

2 Friction Bands Complt.

2- Mandrels 59240 13.03 28  
 32 Regular Plates } 20320  
 4 Slugger " } 2728 } 857.08  
 7 Blank " } 1240

Macph. Mark on Mandrel 4495 24  
 " " " Plate 760.

288. Bolts for Regular Plate 216.00  
 16 " Slugger 13.60  
 Weight of English Mark 125# 27.05  
 304 Washer for Bolts 90# 2.25

(3)

# Forgings -

2 16" x 13-1/2" Shaft. 18330\* 703.20

2	Short Jenson Bolts	}	7562*	667.22
2	Long "			
16	Hex Nuts			
8	Washers			

40	Foundation Bolts	3980*	79.60
50	Sq. Nut.	160	16.20
50	Hex Nut.	124	16.20

707 Bracing Bolts.  
58 Circular & Large Bolt & Nuts.

8	Short Pillow Block Bolt & Nut.	}	677*
8	Long " 3. "		

30 Bolts for Steel Hopper. 126\*

1	Pelle Rod Shaft. 6 7/8 x 125	1310*	58.95
1	Idle Pulley Chp. 3 1/2 x 48	165	}
1	Worm Shaft.	75	
1	Gleitch "	100	
1	Shaft Shaft.	85	
			15.58

Steel Floor Beams over Ralls. (4)

Carnegie Steel Co.

2 Angle Brackets.

40744\*

\$ 808.56

29.00

Roller Feed over Ralls

3	Casting. Pt # 3025	8700	144.00.
2	Bearing "	1657	132.50
2	Caps	1657H	19.75
	Machine Work - Bearing -		4.20

1	Worm Casting # 2521	270*	
2	Caps -	1917	82
2	"	2520	70
2	Brackets	2522	124
	Machine Work -		12.40
			4.44

1	Worm Wheel	610	
1	Worm -	141	95.00
1	Pair of Miter Gears -	110 -	25.00
4	Spoke Collars -	360	9.00
	Machine Work		7.20

1 -	18" Hill Friction Clutch -		30.00
1	20" Pulley		12.00
2	3 1/2" Pillow Blocks -		15.20
2	2 1/2" "		10.00
	Composition Washers -	16 -	5.12
	Machine Work -		1.25



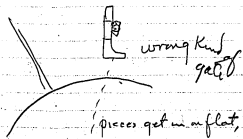
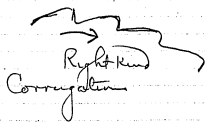
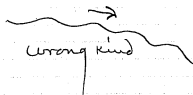
**Edison Ore Milling Syndicate, Ltd., and Related Companies  
Standard Construction Corporation, Ltd.  
Pocket Notebook (1902-1904)**

This pocket notebook was used mainly by Edison, probably during the period 1902-1904. Included are notes and drawings pertaining to the design and construction of the iron concentration plant at Dunderland, Norway, and to operations at Edison's cement works in Stewartsville, New Jersey. Many of the pages contain references to Edison's correspondence with William Simpkin, chief engineer of the Standard Construction Corp., Ltd. The flyleaf is inscribed "Sketch & rough notes for Simpkins." The cover is marked "Simpkins." The pages are unnumbered. Approximately 50 pages have been used.

WM. HANK CO.,  
STATONERS,  
50 MADISON LANE,  
NEW YORK.  
No. 11

Sketch & rough  
Notes for Simpson

Roller feeds:



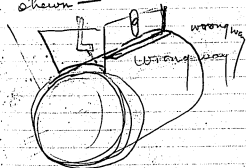
pieces get in, or flat,

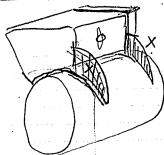


Right Kind of  
guts  
Rounded



only an edge should be  
used & that rounded as  
shown —

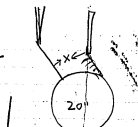




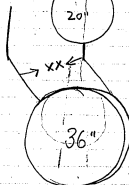
Right way

As feeds are now made after  
one leaves the gate it slides  
off on the side when gate  
very much open we  
put check pieces X X  
Extension this prevents  
going off sides

X to 30  
Narrow at  
Choke



XX no  
Choke



Can feed more with lower  
speed the lower the speed  
the more open the gate  
the more nearly does it  
feed the theoretical amount

~~from~~ the belt bringing  
returns from Dryer to  
Crushers should have  
only such a speed as  
will give no more than  
1 or  $1\frac{1}{2}$  inches of return  
over whole width of belt  
& reduce the speed to  
do this so a man can  
be stationed at belt  
to act as a picker for  
batts of legs, drill heads  
etc, otherwise a link  
or pin will continue  
going the rounds till  
worn out — The returns  
will be greater in the soft  
winter than summer  
on account of ice &  
mud making screening top  
dryer bad —

The position size and  
whole arrangement of the  
furnace at Dryer is good  
can't be improved in  
over the whole kind of  
one perfectly —

Regular push buttons  
off a plate in mill from  
dust etc we have  
a one that works well  
in dust - you can order  
a sample any time —

The pyrometer should be  
placed in the box at the  
highest intake at one  
corner farthest from  
intake and read 600  
when ore is passing :



on the opposite side of  
Each intake box at  
Dryer. The door should  
have a hole cut in  
with a slide on outside  
where a strip of mica  
can be slid in & easily  
withdrawn to clean —  
The flame can be seen  
& in case of a block  
it can at once be seen  
between what sections  
the block is —

The speed of the fan is  
on top  
of Dryer —

Dont forget the water for  
Bearings of Exhauster.  
top Dryer gets very  
hot —

Wood must not come  
within 3 ft of Dryer  
at floor level - no wood  
should be used on floor  
where fan is, one smoked

Motor driving conveyor from  
Crushing plant should  
get outside air into  
Gunny Chambers  
dble exhaust fan Motors

Gunny chambers are  
a great success -

Our bell system of  
having a number of bells  
throughout each section  
of plant is very successful  
when we start up & shut  
down no good we had

to adopt a distinctive  
whistle on each plant  
as at Edison - any man  
Can ring bell in Engine  
room & Engineer answer  
by a whistle repeating  
the signal -

~~The~~ Signals were changed  
here supposed to be an  
improvement had to be  
changed as used at Edison  
in fact ~~most things~~ <sup>for most things</sup> changed  
improved ~~up~~ <sup>up</sup> thought  
to be better had to be given  
up - the Ekman device or  
method used

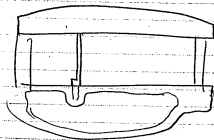
The ~~2~~  $\frac{1}{2}$  inch screen  
gave stuff unnecessary  
fine & too much returns  
was changed to  $\frac{3}{4}$  inch in  
screens top Dyer - this gave

about  $\frac{1}{2}$  inch stuff -  
think you should use  
one inch screens, don't  
use any thicker sheet  
than  $\frac{1}{16}$  thick if checks  
is made its capacity goes  
down -

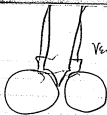
Carbon brushes should be  
ground to the same radius  
as the commutator  
otherwise sparking on  
vectors. The Ringman  
Motor brush is not allowing  
success without they are  
Eased up in the center  
the Carbon ground to the  
radius of the commutator  
then fast right they  
give for a safe design  
They are very much

more complicated than  
Yard Elks which we  
have here + appear us  
better if as good before  
you close for Nations with  
Penguin or anybody  
else! especially Penguin  
let me see the specifications  
they are shy on something  
+ are no good in a mill  
where they receive no  
attention whatever.  
with their present bearings  
the bearings we put on  
with the new change are  
all right with work +  
no felt. I do not believe  
there is a water machine  
that is suitable for mill  
purpose that is as good  
as ours with present  
Reservoir bearings. //

Don't have a dead  
 end to a tunnel  
 under a stock house  
 have opening at both  
 ends for ventilation  
 Motors & machine  
 Rusts, Motors get wet  
 Etc -



3 shelves  
 large pieces  
 on 3 High



Very smooth under  
bridge

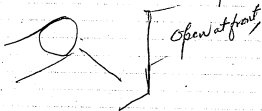
3 High -

All belts have Rubber  
angles -

~~One use one inch screw~~  
~~shot across 4 screws~~  
~~under 3 as below~~  
~~not too~~

Exhaust top Drier pipe  
heavy now 1/4 - lagged  
gts very hot, iron floor  
plenty twing windows

Water Cooled bearings -



Roller feeds in  
Dundelland Block  
houses not neces-  
sary use chutes & Control  
Speed of Belt by  
Dynamo & Motor



Drawn Trith of plate  
after 5 seeds sketch

2 top floor of Dryer  
should be all windows  
all sides  
Other floor more  
windows

Windlass & ratchet for  
raising doors of  
Rolls





Rock stock -

7.28

Must have return belt  
from Dryer hanging  
apalls back go slow  
enough for picker man

1 screen Higher might be  
an advantage -

Links and Shaker +  
improved safety Catcher  
on Lewis + Mount Coll.

Open up Dryer bldg  
on account heat,

Blower motor on  
Furnace Rock stock

Only Chutes under  
stock. Have stop &  
start belt,  
Bell to ring more  
or less w/ lat  
head pulley -

All Chutes open  
place for man to stand  
to clean screens -

36" Roll or rather 5 ft  
roll happens so easily  
Clean out ore when  
stalled -

Winding to raise  
doors -

Blowers, Mount  
Baffle plates on a  
separate fixture &  
slide in side etc  
this permits adjustment  
Roll hanger.

all roller feeds driven  
from frame 6 frame on  
one motor with chance  
to change gears also  
on end of the long frame  
shaft drive roller feed  
shaft by sprocket pinion  
a change of gears -  
flaps over month.

---

All Benjamin Malon  
have one pair of  
brushes under

The arms that  
Extend out, the will  
Must be shut down  
if any particular  
Brush under the arm  
has to be fixed. This  
is Hell—

Explain to  
Rotten Worm &  
Special Worm &  
Casing on

Roller feed 1st 36  
all spur gear  
Tram ~~same giant~~  
~~dump fall~~

~~No worms~~  
If possible have  
no pinion at bottom  
of a gear as  
gear casing  
holds no belts  
Open off -  
all gears below  
50" dia Cast Iron



and arrange to have  
same faces as near  
as possible to save  
multiplied patterns

All previous  
pages sent  
in letter 104 -

also letter 5 about  
billed plates + new  
proposed shearing  
device sent in 45

not in better to  
put it in holes -

Small air compressor  
gear motor driven -

Hard to plane out both  
sides middle rock & #4  
Couldnt start,

Had put Hill starting  
chisel -

Drives Little air Gauge gear pump

Walkway & ground  
over roped <sup>Holes</sup> and skid

flooring with cracks  
ng - either a deep  
width or thin now  
on wood concrete block  
lepped -

Letter No 6 explains  
all above except brackets,

Hopper below grant can be  
of  $\frac{1}{2}$  to  $\frac{5}{8}$  sheet and  
has being walked by enough  
to require heavy hopper  
this gives good chance to  
chicken & ~~to~~ or get hand  
hopper removes all plates  
& on when blocked -

Think the driven Roll -  
✓ Could have a close grain  
Cast instead chilled and  
thinner than chilled rolls  
New danger of flat spot,

✓ The Chilled wheels are  
on too light should be  
on easy but not light  
so easy removed if  
soft spot develops

~~propulsion wrong bet~~  
~~little & big roll~~ ✓

S. delivery at Blower  
+ screens horrible mess  
10" opening to carry  
several hundred tons  
angles all wrong ✓

Coal plant elevation  
amplified



Short chain motor  
on account Oil film slip  
Make Kufz Self-acting motor

~~Don't use <sup>new</sup> on Giant~~  
~~Roller feed - open -~~

~~Cause of shakes top floor~~  
~~grants, to roller belt pulley~~  
~~11th Street Cross & beam -~~  
~~bleky not bread to stone -~~

Walking bet Roller canvas  
planned bet top ways ~~floor~~

~~Leaking of Cross & beam~~  
~~Sheet not done off floor~~

~~Cutting down in steel~~  
~~front 1st to 5th floor -~~

~~Our Camp has hung~~  
~~Reverend~~

Letter No 8  
Was only in regard to  
3 High Hauls for 5 ft  
Rolls -

on gun - our reg bearing head with  
oil pit left off - grease cup  
put on - pin holes in all links to  
oil -

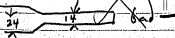
Suggested if possible under  
screws + open ~~chrome~~  
Trip Driver -

Provision on roll for 3 High  
if gate come on we on starting  
up -

Caro changed links  
~~to 100 point rollers~~

Hester make sketch of  
Hopper + roll now over  
3 High -

Dont narrow reports + chutes  
where there is no necessity



~~Dryer furnaces larger more  
area way -  
Links on shelter -~~

Least 36 Rolls Corrugated not so large + cast on ground flat -

Post him about Carbonated  
Chute & strike plate &  
How we fixed chute under  
Chalk 3 High fixed 6 then  
Hester <sup>and</sup> Hatch of mouth  
at Rell

Say that we did what he  
stated in his letter of Sept. 2  
Regarding Giant Grounds -  
We also rehabilitated with our  
Reg. Battle, & Giant river  
Cold now -

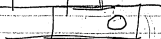
~~Tell him Van der Grinten  
letters~~

Tell him abt open chutes  
& sports,

See letter Sept 1.  
Spring ~~down~~ ~~and~~ ~~are~~ all right  
but fix one of the bearings  
+ make housing runny thinner  
stronger than 3 High Chalk.

Tell S about getting  
up my sketches though  
I'll send originals -

Heavy Motor shafts,  
shown on 6<sup>th</sup> gear  
long bearing 5 ft. roll





How about over-hung pinions and  
Winters, chatter, & kee sprunk vs  
aground & ~~expensive~~ pinion & pinions,  
& ~~complicated~~ ~~more~~ -

Shot chain - ~~try~~ with ice around  
oil film in shaft & ~~gears~~ lodge  
no settling pocket,

Doubt if we get 60% efficiency w 3 H.  
Roll without making a lot of fine  
think we should go above 40 percent.  
since the return will be very heavy  
& think 36 belt will be overloaded.  
these would be ~~about~~ 930 tons.  
of course we ~~can't~~ get 60%  
but it will have the objectionable  
fine - say that 8 to 10 tons on each  
belt was a mistake as we assumed  
skips held 6 tons when on weighing  
then only weighed 5 tons so a correction  
should be made in addition with the  
amount we had the belt was very

Wavy between the idlers -  
Lohndes say that with idlers  
present distance apart 400 lbs  
of Roundwood would be as  
much as a 24" belt skinner do  
+ on incline. The stretch on belt  
will cause it to be taken up  
very often, altogether Lohndes  
put in the 4 1/2 inch belt, 8 ply  
instead of 6 ply -

Its the length of the chains + weight  
that Count, rather the depth of  
immersion in the sawing the  
trouble is film of oil on shaft  
would not ~~be~~ to cut thro it  
maybe sharpen the edges then it  
cut through or did work but if  
surface the graft there is film  
on thick oil + chains stand still

Call attention to bottom of  
conveying belt dropping stuff  
below & see how put glass floor -  
Elo why not raise ceiling up as this is  
open but it floor  
Say quarry channels should be  
on stilts instead of outside as  
dust is everywhere God outside

Of course its good idea to  
have great extra capacity in CP  
but then is how big want do,  
so we should have to work mine out  
10 hours or have a very expensive  
Coer storage. Our mine must  
work 20 hours.

Say that need not go good Corrugation  
3 High - Cost them so there is  
cleaning  $\frac{1}{2}$  inch - show new  
plate Corrugation - also new  
Roller feed ~~quarry~~ 3 High with  
gravel - ~~told him~~ ~~trucks~~  
Check our sports check &  
next every year 1 month sports

Hester sketch!

How I ~~think~~ over our  
screen and ~~all~~ clay -  
also about ~~the~~ Cus. layer  
amount ~~at~~ at. 11-5 + 2-5 1/2

Scraped ~~just~~ perhaps under  
than 5 ~~got~~ to  
Cost now ~~and~~ cost much higher  
to get ~~the~~ clay

all above in letter  
pro 9 -

1st ~~5~~ <sup>1 1/2</sup> bottom to bottom 16  
2nd ~~5~~ <sup>3</sup> " " Not in letter 10  
3rd ~~5~~ <sup>1 1/2</sup> "  
4th - just as close as you can get  
shower that plates striking -

you can find your blowers at Ten  
of December - it will be difficult  
to say how much you can find  
your blowers ~~with~~ per how -  
The stuff is just unlike our  
I think ~~was~~ Bally's stuff. I believe  
that of Orange or Red blowers.

Speak about Rucker feed weigh house

Comit -

Letter 10

Speak about the minor  
bearings on the aft rolls -  
has to be a tendency  
to give power & thrust in bearing  
using a little too much dia  
x bearing out bearings - that the  
shaft should be as large as  
can make it a bearings ample &  
well secured - also

Letter 10  
about possibly of having  
grains fastened by sheer  
pins & brags / brags for  
future Carl / grain balls  
used at 15" but sheer holes  
with necessity of using  
them is known

5 dump spools, 65  
blowers / went work  
mistake Ralls  
feeds at top, Letter 10

Say that I am in doubt & think  
it very dangerous to use holes  
to feed ore to blowers - but after  
all it will be ok - could ever  
be sure that the ore would always  
be dry where was no ~~blower~~  
Caldete horses in ore. It  
might answer but with any

high efficiency in 3' High it  
is doubtful if holes will  
work

~~But~~ I have been sweating blood  
over sports delivering to roller heads  
at chalk blower. We have been  
working at it 2 weeks several times  
we thought it was ok but when  
the roll got proper pressure & rock  
segregated in places & we got  
extra fines c& the sports plugged  
notwithstanding we have put separate  
sports & raised the angle

~~the angle~~ We are now making  
a radical change to do away  
with solid filled pipe where the  
pressure originates. We are using a  
solid incompressible column  
This is the device:

Sketch

all in Letter 10

let 10  
Spoke about 4 way spout  
in Rock street

Say that 24 return belt  
from dryer to rally well be  
ample but distribute it  
fairly well - ~~if not 75 bush~~  
~~blowth will just that~~  
~~larger pieces also & these~~  
Say that balls etc  
are easily seen & picked -

Letter 11

Say that the distribution top  
of dryer is very important &  
should be carefully watched our  
work will ~~if not~~ be doing  
clagging

Good Rall plates chilled  
full inch



Swante data as to power and  
all kinds conveyors lighter  
loaded - ~~Harbor~~

Spoke about Chertys Rock Stk  
too low down ~~had~~ cut them  
all off 100 tons max  
Takes several hours get  
water out tunnel -

Brick doors no iron in  
Dryer ~~purified~~ <sup>also two of doors</sup> -  
doors set on iron outside  
not supposed to radiate -  
No water now around heat

Whaleboat Motors better  
redesigns cranks also wider  
base - also arms of all brake  
Can be fixed while running  
Buck Chambers ~~has~~ <sup>has</sup> ~~not~~ <sup>not</sup> ~~fixed~~ <sup>fixed</sup>  
new fans - ~~not~~ <sup>not</sup> ~~not~~ <sup>not</sup> ~~fixed~~ <sup>fixed</sup>  
trouble crossing fields and lands

Reinforced Carbon has been  
spark of made too loose and  
not 6 in. if loose Carbon must  
be ground to contour -

Regulator tilt under stroke  
hopper by Sep Dynamometer,

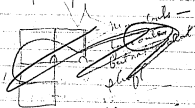
Give him details Roller for  
cross check 3 High of goos  
ok -

~~Butt~~ Better design the baffle  
plate for 6 in. ~~to be drawn~~  
~~to be used~~ ~~to be used~~ ~~to be used~~  
make one extra Bal by it  
actually -

Chart under ~~Chart~~ 3  
H still 6 in. up straight  
2 ft per inch and

Delivery points 20 ft high elevations

plates are ~~glued~~ glued  
so exchanged to get even -



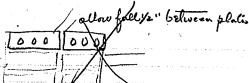
21" end no odd section



Holes in mandrel must be laid out  
quite accurate so plates can be exchanged  
= Use washers under bolts  $\frac{1}{4}$  inch  
No fins due to jamming on washers

Run facing strip down to shaft  
+ only face the outside...

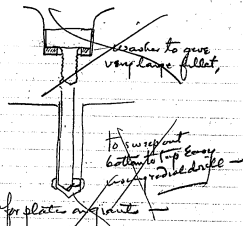
big fillet on bolts for plates  
otherwise ~~break~~



8 bolts to each plate  
These give uniform better teeth +  
thicker symmetrical - ~~good~~ ~~good~~  
metal at ends - ~~also~~ carry the  
outer corners edges clear across  
plate so will strengthen + will  
be good when plates changed

Don't have the core holes in  
mandrel. There is only  $\frac{1}{2}$  inch  
across the key to Core - something  
might happen - it only saves 5 lbs  
of metal ~~at~~ ~~the~~ ~~end~~ ~~of~~ ~~the~~ ~~shaft~~ ~~is~~ ~~a~~ ~~saving~~ ~~as~~  
it reduces ~~the~~ ~~weight~~ ~~of~~ ~~the~~ ~~mandrel~~ ~~considerable~~  
Kinetic Value -  
in key when plates are made a  
very good fillet at bottom

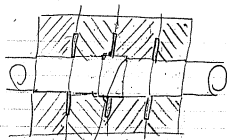
Make



for plate in joints

The lock sheets of bolts.

should be  $1/16$  lower  
that come flush  
with top



best way - think  $1/16$   
Varying in sizes of shaft  
plenty & will be cheaper -

Case press who  
hard it goes with jump sometimes  
& goes beyond -

Don't use. Natural rollers on  
both ends - only on opposite end  
from Engine -

Motor & hand pulley bringing stuff  
from Rolls to blowers & shes & so on  
look out for your hand pulleys & drive  
on the conveyor through crossers -  
I mean stuff for bearing that pulley hand to line -

1001: 007-bearing how about chain  
bearing & rearing oil, when  
it goes thro hole -

1002: Are you going to bore out head pull  
bearing rabbit & then rebore to  
make shaft fit bearing without  
scraping

How cut chain can run

This side in - 1003



Tell him about ~~chapter~~ Elevator  
detls. S =

Also about the coupling of 3 H  
to be secured to shaft so no shift  
at belt collar

Number all things here after,

All back of this crossed off  
in letter 11 - sent Giant  
detals & drawings by Hank  
in letter 11 -

300: Speak about each guide rope  
above 3 High, adjust -  
at proper angle - say the  
angle of rope made bearing

Bearing level of shaft

301: Bottom bearing

if only find you in quantity  
to all pbl. no -

also in letter 12

Speak about light chain in machine  
fitting (lost in time, don't know)  
Nurs - find out if bearing pencils  
when chain twisted

Speak about stored power at  
plant & speed of plant not enough  
H or 5/8 size rod - what was  
done. Have power plant speed  
to plant at 2 or 3 miles per hour  
170 Rev at least

Speak about lorry on  
shutting box break  
Cutter & shaft of motor  
Screwing it up by wood  
until it pulls shaft  
& blow free

Letter No 13 Sent  
in Re 5 ft & shaker  
drawing Oct 29<sup>th</sup>

Letter 14 mailed Nov 8  
about chutes & 5 coming  
over also about no work  
in fine doors Dyer

Letter 15 about  
photo of chute export

2-17-1965

1) Ppt for Controller - ✓  
as at Sturaton

2) Ppt for automatic  
coupler - ✓

3) 20" Pulley for John-  
chiller fan

4) Frame cap - with new  
base - 13ft - ✓

5) Large Green cap - 15ft

6) Screen over Dye - New

7) Sliding Windows - New

8) New Lumber for Reddyne -

9) Dust catches and Pipes -

10) Changes in Rock Stock  
flow

11) Ppt for General Drive  
for Conveyors - ✓

12) From Dye & Stock House  
Fan

13) Fine Grinding Rolls -

14) Blue Print for Governor -

15) New Shear division

16) Base for Motor

1 over

(Lamp load)

Spit for Snake Shells  
and connections &



### EDISON PHONOGRAPH WORKS RECORDS

The Edison Phonograph Works was incorporated on May 3, 1888, and held the manufacturing rights to Edison's phonograph. Edison was the founding president and majority stockholder. The company operated a factory in West Orange for the manufacture of phonographs and phonograph records, as well as Bates numbering machines and other Edison products. Its products were distributed through sales companies, including the North American Phonograph Co. during the 1890s, the National Phonograph Co. during the 1900s, and Thomas A. Edison, Inc., after 1910. Its factory was destroyed by fire in December 1914 and subsequently rebuilt. In 1924 the company became part of Thomas A. Edison, Inc. The records cover the years 1888-1916. Related material can be found in the Document File Series. The minute book, along with financial documents and other items for the period 1888-1898, can be found in *Thomas A. Edison Papers: A Selective Microfilm Edition, Part III*. A finding aid for the archival record group is available at the Edison National Historic Site.

The selected records are arranged in the following order: (1) Ledger (1907-1916); Journals (1901-1917); and (3) Profit and Loss Statements (1899-1911). Among the records not selected is a binder of shop notices indicating changes in part numbers for phonographs, motion picture apparatus, Bates numbering machines, and other products manufactured at the Works. Also not selected are two investment ledgers listing real estate and machinery accounts (1894-1913); five cash books (1898-1911); and a small folder of stock transfer receipts and routine memoranda.

#### **General Ledger #4 (1907-1916)**

This ledger covers the period March 1907-March 1916. As the account book of final entry, it summarizes transactions relating to the manufacture of phonographs and Bates machines. Included are capital, sales, insurance, and reserve accounts, as well as accounts in the name of other Edison companies.

#### **Journal #4 (1901-1908)**

This journal covers the period February 1901-February 1908. Chronological entries provide information about transactions posted to various accounts and recorded in the general ledgers.

#### **Journal #5 (1908-1917)**

This journal covers the period March 1908-February 1917. Chronological entries provide information about transactions posted to various accounts and recorded in the general ledgers.

#### **Profit and Loss Statements (1899-1911)**

These unbound statements consist of annual profit and loss reports that cover the period March 1899-February 1911. Each statement provides summaries of costs, sales revenues, and inventories at the end of accounting periods. The products covered include phonographs, projecting kinetoscopes, numbering machines, wax, and motors.

#### **Binder of Part Number Changes (1909-1910)** [not selected]

This binder covers the period April 1909-June 1910 and consists of shop notices by H. Thomas Oliver, George B. Redfearn, and other employees of the Edison Phonograph Works. Each notice indicates a new number or numbers for components being manufactured by the Works. The components are named as well as numbered, and the models and products for which they were intended are also specified. The products include musical and business phonographs, shaving machines, Bates numbering machines, and projecting kinetoscopes.

**Edison Phonograph Works Records  
General Ledger #4 (1907-1916)**

This ledger covers the period March 1907-March 1916. As the account book of final entry, it summarizes transactions relating to the manufacture of phonographs and Bates machines. Included are capital, sales, insurance, and reserve accounts, as well as accounts in the name of other Edison companies. The flyleaf is inscribed "Works Genl Ledger #4." The book contains 473 numbered pages and an index; many pages are blank.

525

Woods Gap Ledger

# 4.

Automobile Account	9
Accounts Receivable	39.5
Accounts Payable	69.5
Adjustment Account	351
Accrued Interest on Bonds	201
Accrued Pay Roll	203

Bond Interest	199
Unpaid	209
Amount of Insurance Premiums	309
Enter Mfg. Co.	309
Stock, 1/2	256

Capital  
Cash  
Cotton.

3  
189  
362

Dividend Account  
Reformed Charges

219  
15

Edison Bros. Mfr. of Bell Bonds 279.1

Edison Mfg. Co. Interest 4% 59

Edison Storage Battery Co. 311.1

Edison Mfg. Co. 321

Edison Building Phone Co. 331

Edison Inc. Thomas A. 272.3

Edison Inc. Interest 4% Thomas A. 60

Edison Storage Battery Co. Interest 4% 760

Eastern Coal & Coke Co. Stock Acct. 37

Edison Bros. Mfg. Co. Loan to Ed. Co. 34.16

Edison Bros. Mfg. Co. Loan to Ed. Co. 34.16

Edison Bros. Mfg. Co. Loan to Ed. Co. 34.16

Edison Bros. Mfg. Co. Loan to Ed. Co. 34.16

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Edison Bros. Mfg. Co. Loan to Ed. Co. 34.16

Edison Bros. Mfg. Co. Loan to Ed. Co. 34.16

Fidelity Trust Co. 7.1

Furniture & Fixtures 239.1

Fidelity Trust Co. Life Insurance Co. 291

Fidelity Trust Co. Life Insurance Co. 299

Fire Loss 300

Life Insurance Company 223

Life Insurance Company 223

Life Insurance Company 223

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Life Insurance Company 223

General Expense  
Goodwin Mfg Co, Settlement

99'  
30d



Insurance Bureau Fund 305,353.1  
Bonds 307

Liability Insurance Review Fund 295

Miscellaneous Assets

Manufacturing

Machinery & Tools

5 1

124 1000

249 1000

National Phone Co Interest apor	289
Nation Receivable	285
National Phone Co	341
Notes Payable	80 263
Newark Second Hand Machinery (Partial)	38

259

2851

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30.36.3 ✓

38

*Profile & Loos*

279/

Real Estate & Building  
Reserve for Water  
Income Tax Reserve  
Reserve for Bad Debt

269  
296  
358  
359

Reserve

Sales  
Official Account A  
Salvage  
Sup. Co.

159  
289  
303  
—

Confederation Insurance Reserve Fund

301

Notes Received

337

Unpaid Bond Interest

309

Unexpended Insurance Premium

347

Unclaimed Wages

65

United States Government Bonds Pay. 360

7/10/5



Capital

Mar 1, 1901 Journal Ledger # 5 has been on hand 1 from Journal Ledger # 3 x 600,000.00



Fidelity Trust Co

1907

March 1 From General Ledger No. 3

March 1 To Cash 100.00

## Automobile Account

March 1	From General Ledger #	32	10,750.00	1907	Feb 29	Profit & Loss	371	115,000
April 30	Accounts Payable	31	9,000.00			Balance		9,000.00
May 31	"	327	68,000.00					178,500.00
			178,500.00					
1908								
March 1	Balance		9,000.00	1909	Feb 28	Profit & Loss	308	27,500.00
						Balance		67,500.00
								9,000.00
1909								
March 1	Balance		67,500.00	1910	Dec 31	Profit & Loss	145	21,531.16
Dec 31	Accounts Payable	325	1,642.66	1910	Feb 28	"	374	1,015.75
Jan 21	"	327	3,500.00			Balance		8,647.66
			8,647.66					
1910								
March 1	Balance		6,485.75	1910	Dec 31	Profit & Loss	73	1,671.44
						Balance		4,814.31
								6,485.75
1911								
March 1	Balance		4,814.31	1911	Dec 30	Profit & Loss	112	1,013.40
						Balance	1205	1,205.68
								3,628.28
								4,814.31
1912								
March 1	Balance		3,628.28	1912	Dec 31	Profit & Loss	155	1,723.00
Nov 30	Accts Payable	61	1,443.71	1912	Feb 28	Accts Payable	101	3,204.28
Dec 31	"	75	18,000.00			"	171	1,730.03
Jan 31	"	89	19,550.00			Balance		3,628.28
			8,871.09					8,871.09
1913								
March 1	Balance		3,628.28	1913	Dec 31	Profit & Loss	208	1,036.68
June 30	Accts Payable	166	1,490.29	1913	Feb 28	"	223	2,073.41
						Balance		2,073.41
								3,752.06
1914								
March 2	Balance		2,148.01	1914	Feb 28	Profit & Loss	179	827.35
						Balance		1,658.69
								2,148.01
1915								
March 1	Balance		1,658.69	1915	Dec 31	Profit & Loss	345	1,149.49
Oct 31	Reg. of Dist.	107	67,883.45	1915	Feb 28	Accts Payable	249	5,000.00
Dec 31	"	151	43,000.00	1915	Feb 28	Accts Payable	249	5,000.00
Jan 30	"	149	1,144.85	1915	Feb 28	Accts Payable	249	5,000.00
Feb 29	"	110	1,100.00	1915	Feb 28	Accts Payable	249	5,000.00
Feb 29	Chas. A. Brown Co.	310	1,100.00	1915	Feb 28	Accts Payable	249	5,000.00

*Automobile Account*

Date	Particulars	Debit	Credit	Balance
Feb 27	To Balance forward	10.11	10.11	10.11
Feb 28	To Balance forward	10.11	10.11	10.11
Feb 29	To Balance forward	10.11	10.11	10.11
Feb 30	To Balance forward	10.11	10.11	10.11

## Referred Charges

Dec 31	Acct Payable	76.89	Dec 31	Due Res Fund	154.18	1100.00
Jan 31	"	89.10	Jan 31	"	158.00	53.00
Feb 28	"	101.10	Feb 28	"	159.00	56.80
						251.10
						1000.00
Mar 31	Balance	115.10	Mar 31	Due Res Fund	173.00	124.06
Apr 30	Acct Payable	138.10	Apr 30	"	177.00	97.89
May 31	"	138.10	May 31	"	180.00	141.35
Jun 30	"	138.10	Jun 30	"	181.00	155.57
Jul 31	"	138.10	Jul 31	"	186.00	265.57
Aug 31	"	138.10	Aug 31	"	188.00	311.39
Sep 30	"	138.10	Sep 30	"	193.00	381.39
Oct 31	"	138.10	Oct 31	"	195.00	466.12
Nov 30	"	138.10	Nov 30	"	199.00	534.40
Dec 31	"	138.10	Dec 31	"	205.00	578.00
Jan 31	"	138.10	Jan 31	"	210.00	702.77
Feb 28	"	138.10	Feb 28	"	214.00	725.00
						861.75
						1746.38

Mar 31	Balance	278.75	Mar 31	Due Res Fund	231.00	759.57
Apr 30	Reg of Dist	278.75	Apr 30	"	231.00	102.10
May 31	"	278.75	May 31	"	235.00	161.25
Jun 30	"	278.75	Jun 30	"	236.00	201.77
Jul 31	"	278.75	Jul 31	"	241.00	251.10
Aug 31	"	278.75	Aug 31	"	241.00	311.39
Sep 30	"	278.75	Sep 30	"	241.00	381.39
Oct 31	"	278.75	Oct 31	"	241.00	466.12
Nov 30	"	278.75	Nov 30	"	241.00	534.40
Dec 31	"	278.75	Dec 31	"	241.00	578.00
Jan 31	"	278.75	Jan 31	"	241.00	702.77
Feb 28	"	278.75	Feb 28	"	241.00	725.00
						861.75
						1746.38

Mar 31	Balance	979.62	Mar 31	Due Res Fund	283.00	1501.66
Apr 30	"	979.62	Apr 30	"	283.00	2107.22
May 31	"	979.62	May 31	"	283.00	2490.22
Jun 30	"	979.62	Jun 30	"	287.00	2777.22

Deferred Charges.

<sup>1906</sup>					D.P.
Feb 1	Forwarded	778.62	July	Forwarded	778.62
				\$1. Inc. George Bond 20.	65.75
			Aug 31	"	910
			Sep 30	"	912
			Oct 30	"	978
			Nov "	"	120
			Dec 31	P. J. J. Shm	511
			1906		
			Jan 31	Rever for Drum	500
			May 29		571
				To balance	
		778.62			

176	7/17/62
March 1, 2. Quercus agrifolia L.	200.00

## Notes Payable

913									
Sept 2	Cash	99	15000.00	May 1	Accts Receivable	66	15000.00		
Oct 16	"	109	5127.76	June 18	"	Payable	67	8228.99	
27	"	112	1712.73	July 15	"	"	"	1201.62	
Nov 5	"	114	1181.91	"	"	"	"	3195.79	
10	"	"	1131.15	21	"	"	"	1201.62	
14	"	"	3195.79	19	"	"	"	6828.21	
17	"	"	6733.31	13	"	"	"	5197.74	
19	"	"	8604.00	25	"	"	"	2632.77	
21	"	120	4028.01	1	"	"	"	1181.91	
"	"	123	4180.19	15	"	"	"	8604.00	
"	"	"	1142.96	10	"	"	"	1131.15	
"	"	"	5175.05	11	"	"	"	6733.31	
24	"	"	24003.27	21	"	"	"	5197.74	
25	"	"	2632.77	21	"	"	"	6828.21	
Dec 15	"	130	8505.3	21	"	"	"	1201.62	
"	"	"	9573.4	"	"	"	"	1201.62	
"	"	"	1952.59	"	"	"	"	1201.62	
22	"	133	389.50	15	"	"	"	1201.62	
"	"	"	5714.93	"	"	"	"	1201.62	
26	"	"	1194.10	"	"	"	"	1201.62	
29	"	134	6834.44	20	"	"	"	1201.62	
31	Accts Payable	206	3892.42	28	"	"	"	1201.62	
Jan 2	Cash	140	5288.90	26	"	"	"	1201.62	
"	Forwarded	31	119303.26	28	"	"	"	1201.62	
Feb 2	Receivable	70	5000.00	28	"	"	"	1201.62	
Oct 22	Accts Payable	71	5142.42	28	"	"	"	1201.62	
Nov 11	"	72	881.12	28	"	"	"	1201.62	
17	"	"	8027.1	28	"	"	"	1201.62	
18	"	"	1245.91	28	"	"	"	1201.62	
19	"	"	1298.00	28	"	"	"	1201.62	
20	"	"	1149.15	28	"	"	"	1201.62	
Dec 18	"	71	5000.00	28	"	"	"	1201.62	
"	"	72	5618.08	28	"	"	"	1201.62	
17	"	73	3450.84	28	"	"	"	1201.62	
20	"	74	1353.92	28	"	"	"	1201.62	
20	"	75	7203.84	28	"	"	"	1201.62	
15	"	76	1680.38	28	"	"	"	1201.62	
20	"	77	3197.82	28	"	"	"	1201.62	
20	"	78	1728.47	28	"	"	"	1201.62	
"	"	79	276.74	28	"	"	"	1201.62	
"	Forwarded	31	119303.26	28	"	"	"	1201.62	

## Notes Payable

Jan 2	Forwarded	30	76462.16	Dec 31	Forwarded	30	119303.26
23	Cash	145	15000.00	21	Accts Payable	73	2419.40
Feb 18	"	5	5000.00	16	"	"	15000.00
21	"	6	5142.42	Jan 2	Receivable	74	2500.00
28	Accts Payable	244	15000.00	"	"	"	2500.00
"	Balance	"	3297.68	"	"	"	2500.00
"	"	"	128222.66	"	"	"	2500.00
Mar 11	Cash	122	881.12	2	Balance	75	2446.89
17	"	163	8237.11	73	Accts Receivable	76	2000.00
18	"	"	5618.08	70	Payable	81	3076.89
"	"	"	1245.91	"	"	82	3312.00
19	"	173	1298.00	8	"	"	3096.00
20	"	"	1149.15	16	"	"	3199.53
Apr 13	"	238	1553.92	13	"	"	4223.56
15	"	253	3197.82	15	"	"	4223.56
17	"	263	1500.00	20	"	"	4223.56
20	"	"	1680.38	76	"	"	3197.82
"	"	273	1728.47	73	Receivable	83	15000.00
22	"	"	7203.84	14	Payable	84	3500.00
24	"	"	24419.40	16	"	"	3422.00
May 11	"	"	2776.74	73	"	"	5000.00
Oct 23	"	333	15000.00	13	"	"	5000.00
"	"	83	20998.99	21	"	"	3449.01
"	"	"	"	13	"	"	3000.00
"	"	"	"	19	"	"	4009.03
"	"	"	"	10	"	"	4021.97
"	"	"	"	21	"	"	3611.00
"	"	"	"	26	"	"	4200.00
"	"	"	"	25	"	"	3321.00
"	"	"	"	20	"	"	3750.00
"	"	"	"	"	"	"	3274.21
"	"	"	"	"	"	"	3000.00
"	"	"	"	16	"	"	2312.27
"	"	"	"	27	"	"	2730.42
"	"	"	"	16	"	"	5500.00
"	"	"	"	14	"	"	5500.00
"	"	"	"	23	"	"	4000.77
"	"	"	"	16	"	"	3166.91
"	"	"	"	25	"	"	3000.00
"	"	"	"	17	"	"	2400.76
"	"	"	"	12	"	"	4178.50
"	"	"	"	16	"	"	5431.99





## Notes Payable

1912	1912	1912	1912	1912	1912
June 15	Forwarded Cash	13	506.675 May	18	Acc'ts Payable
17	"	14	111.993	30	"
18	"	16	6410.12	14	"
21	"	"	389.61	25	"
"	"	"	194.448	27	"
22	"	"	1662.00	4	"
23	"	"	2689.64	8	"
"	"	"	123.45	14	"
"	"	"	1800.00	21	"
24	"	17	1349.75	28	"
25	"	17	1659.58	15	"
28	"	"	5494.50	"	"
"	"	"	241.878	1	"
July 9	"	23	3486.53	18	"
12	"	"	1670.24	"	"
14	"	"	42118.00	15	"
15	"	"	228694	25	"
16	"	"	23477.9	29	"
"	"	"	101323	21	"
9	"	24	1229.04	3	"
20	"	"	5500.00	91	"
"	"	"	1844560	June 1	Acc'ts Payable
22	"	"	118993	16	"
26	"	27	621437	28	"
"	"	"	256162	12	"
27	"	"	198878	15	"
"	"	28	756371	16	"
"	"	"	"	5	"
Aug 2	"	29	296275	11	"
9	"	"	146900	16	"
11	"	30	5000.00	23	"
"	"	"	5000.00	28	"
13	"	"	5500.00	12	"
"	"	"	108929	2	"
16	"	"	230343	14	"
7	"	"	4000.00	19	"
"	"	"	12600.00	24	"
"	"	"	329720	25	"
"	"	"	132486	10	"
18	"	"	5000.00	20	"
20	"	31	26411.19	14	"
"	"	"	"	26	"
"	"	"	"	30	"

## Notes Payable

1912	1912	1912	1912	1912	1912
Aug 23	Forwarded Cash	31	4744.44	June 18	Acc'ts Payable
"	"	"	2721.10	23	"
"	"	"	2340.80	24	Acc'ts Payable
45	"	"	4200.00	18	Acc'ts Payable
17	"	33	1239.12	18	"
"	"	"	1611.55	"	"
"	"	"	4191.62	July 14	Acc'ts Payable
30	"	"	4000.00	23	"
"	"	"	2044.00	"	"
31	"	50	10000.00	10	"
"	"	2	2025.99	22	"
Sept 7	"	36	2159.76	20	"
"	"	"	4350.00	12	"
8	"	"	4350.00	15	"
10	"	27	2099.44	12	"
14	"	"	4350.00	14	"
16	"	"	715.56	"	"
"	"	"	3191.22	7	"
15	"	"	4116.12	12	"
15	"	"	1466.76	17	"
15	"	"	2315.63	19	"
17	"	41	2000.00	16	"
"	"	"	1674.76	21	"
"	"	"	164.57	15	"
40	"	"	3966.07	23	"
9	"	"	5504.66	21	"
41	"	"	5132.76	"	"
27	"	"	4350.00	15	Acc'ts Payable
27	"	"	3100.00	1	"
"	"	44	4116.26	2	Acc'ts Payable
27	"	"	3164.94	1	Acc'ts Payable
27	"	"	5000.00	"	"
28	"	"	4127.46	19	"
30	"	31	4350.00	25	"
"	"	"	1399.00	10	"
Oct 4	"	43	14400.00	16	"
"	"	"	5000.00	27	"
11	"	44	5000.00	19	"
"	"	"	471.07	17	"
13	"	"	1237.00	20	"
"	"	"	4256.91	14	"
"	"	"	2240.00	"	"
"	"	"	02	23	"
14	"	46	4772.79	18	"
"	"	"	1144.14	"	"

## Notes Payable

	1911		367 41 1914 725		1912		367 41 1914 725
	Invoice				Invoice		
Oct	11	Book	46	45017	Aug	4	Book Pungah
	15	"	48	57714		21	"
	18	"		133248		16	"
	"	"		500000		23	"
	"	"		516445		18	"
	"	"		403291		10	"
	"	"		181268		21	"
	20	"	49	101155		26	"
	25	"		150000		16	"
	21	Book	49	151166		23	"
	25	"		500000			
	"	"		500000	Sept	5	"
	26	"		401296		15	"
	28	"		410000		24	"
	"	"		157124		29	"
	29	"	50	516445		20	"
				511166		15	"
Nov	8	Book	2	117451		13	"
	10	"		400000		18	"
	12	"		114007		16	"
	"	"		516445		7	"
	15	"		511166		9	"
	"	"		145235		15	"
	"	"		150000		22	"
	"	"		747544		29	"
	16	"		300000		12	"
	"	"		552116		10	"
	17	"	6	500500		20	"
	18	"		400000		27	"
	19	"		170646			
	22	"		453970	Oct	13	Book
	22	"		176755		14	Book Pungah
	"	"	7	150000		18	"
	23	"		181300		11	"
	"	"		250000		20	"
	26	"		177424		15	"
	27	"		188899		18	"
	6	"	9	1000000		27	"
	"	"		111175		"	
	8	"		500000		"	
	9	"	10	500000		"	
	10	"	10	500000		"	
	10	"	10	414226		"	
				14406		Book Pungah	
	Invoice		367 41 1914 725		Invoice		367 41 1914 725

Eastern Coal & Coke Co., Stock Acct.

1910		1911		1912		1913		1914		1915		1916		1917		1918		1919		1920		1921		1922		1923		1924		1925		1926		1927		1928		1929		1930		1931		1932		1933		1934		1935		1936		1937		1938		1939		1940		1941		1942		1943		1944		1945		1946		1947		1948		1949		1950		1951		1952		1953		1954		1955		1956		1957		1958		1959		1960		1961		1962		1963		1964		1965		1966		1967		1968		1969		1970		1971		1972		1973		1974		1975		1976		1977		1978		1979		1980		1981		1982		1983		1984		1985		1986		1987		1988		1989		1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021		2022		2023		2024		2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		2036		2037		2038		2039		2040		2041		2042		2043		2044		2045		2046		2047		2048		2049		2050		2051		2052		2053		2054		2055		2056		2057		2058		2059		2060		2061		2062		2063		2064		2065		2066		2067		2068		2069		2070		2071		2072		2073		2074		2075		2076		2077		2078		2079		2080		2081		2082		2083		2084		2085		2086		2087		2088		2089		2090		2091		2092		2093		2094		2095		2096		2097		2098		2099		2100	
1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100																																																																																																																																																																																															
1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100																																																																																																																																																																																															
1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100																																																																																																																																																																																															
1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100																																																																																																																																																																																															
1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100																																																																																																																																																																																															
1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072																																																																																																																																																																																																																											







## Accounts Receivable

Apr 30	Forwarded	43 240 11 68	Apr 30	Forwarded	43 240 11 68
May 31	Accts Receivable	354 2945	May 31	General Expense	354 2945
	Sales	516 109 77 547		Accts Receivable	100 00
	Accts Payable	150 43		Cash	20 45
		35 133 63 14		Discount	14 117 00 01
June 30	Sales	524 168 02 496	June 30	Accts Payable	44 47
	Accts Receivable	36 148 08		General Expense	36 148 08
	Accts Payable	160 71 47		Accts Receivable	205 20
July 15	Notes Receivable	204 71 47	July 15	Cash	100 00
31	Sales	540 11 76 51 47	31	Discount	148 08
	Accts Payable	27 76 45 52		Accts Payable	36 43 65 20
Aug 31	Accts Receivable	38 44 67	Aug 31	Notes Receivable	204 71 47
	Sales	554 96 55 38		Discount	157 12 86 143
	Accts Payable	1514 32		Accts Payable	37 4 36 55 20
Sept 20	Notes Receivable	38 15 16 34	Sept 20	Cash	300 00
30	Sales	274 41 53	30	Accts Payable	37 4 36 55 20
	Accts Payable	568 100 63 45		General Expense	125 00
		304 74 60		Accts Receivable	38 100 00
Oct 30	Sales	582 16 203 60	Oct 31	Cash	166 139 238 90
	Accts Receivable	40 50		Discount	45 75
	Accts Payable	414 35 13 52		Accts Payable	38 22 71 99
		203 61 35		Notes Receivable	224 41 53
Nov 15	Notes Receivable	24 43 87	Nov 15	General Expense	39 125 00
30	Sales	596 156 60 52	Nov 30	Cash	175 114 58 43
	Accts Payable	42 51 23 35		Discount	55 29
		213 35		Accts Receivable	40 100 00
Dec 16	Notes Receivable	25 63 35	Dec 30	Accts Payable	97 16 66
	Forwarded	45 18 49 8 74		Cash	104 157 21 60
				Discount	65 14
				Notes Receivable	24 43 87
				Cash	193 150 71 01 2
				Discount	73 28
				Accts Payable	42 9 34
				General Expense	63 20
				Notes Receivable	25 63 35
				Forwarded	45 18 49 8 74
					508 9 53 01

30169 620 08

## Accounts Receivable

Dec 16	Forwarded	44 27 46 11 12	Dec 16	Forwarded	44 27 46 11 12
31	Cash	9 23 5	31	Cash	9 23 5
	Accts Payable	46 243 6 75		Discount	39 47
	Sundries	45 52 16 67		Accts Payable	100 00
	Accts of Sales	413 23 43 54		General Expense	125 00
Jan 31	Accts Receivable	46 11 10	Jan 31	Accts Payable	46 11 10
	Accts Payable	47 25 00		Accts Receivable	46 11 10
	Accts Receivable	48 103 9 77		Accts Payable	47 25 00
	Accts Receivable	48 45 63		General Expense	21 49 8
	Accts of Sales	67 153 8 26 73		Accts Payable	48 100 00
	Sundries	48 41 7 49 9 2		Accts Receivable	48 100 00
	Accts Payable	287 1 1 44		Cash	48 03
Feb 28	Accts Receivable	49 20 7 55 40	Feb 28	Discount	18 20 45 11 22
	Accts of Sales	67 21 23 4 49		General Expense	49 100 00
				Cash	27 182 58 07
				Discount	68 87
				Accts Receivable	50 17 50
				Profit Loss	166 22
				Sundries	49 82 00 2 04
				Accts Payable	50 53 38
				Forwarded	10 35 60
					751 104 6 63
Mar 1	Balance	102 26 60	Mar 31	Cash	37 126 300 74
15	Notes Receivable	28 50 00		Discount	54 76
31	Accts Receivable	55 13 15	16	Notes Receivable	28 50 00
	Accts Payable	4 78 88		General Expense	55 12 500
	Accts of Sales	69 146 19 02		Accts Payable	13 15
	Accts Payable	55 4 89 78		Accts Receivable	78 8
Apr 30	Accts Receivable	57 17 5		Accts Payable	78 88
	Accts Payable	4 16 6 1 56		Accts Payable	43 64
	Accts of Sales	67 14 6 13 7 56		Sundries	56 34 55 84
May 31	Accts Receivable	63 123 8 9 67	May 31	General Expense	57 100 00
	Notes Receivable	28 21 32		Accts Payable	57 17 5
	Cash	54 77 62		Cash	46 153 34 1 46
	Accts Receivable	56 56 7		Discount	4 11 71
	Accts Payable	57 2 68 3 68		Sundries	57 153 99
	Sundries	59 48 1 53 99	May 16	Notes Receivable	28 21 32
	Forwarded	45 18 49 8 74	31	Cash	54 632 70 63
				Discount	61 45
				Accts Payable	58 203 74
				General Expense	100 00
				Accts Receivable	57 17 5
				Forwarded	45 18 49 8 74
					61 45

91562 60

## Accounts Receivable

[illegible]

## Accounts Receivable

[illegible]



## Accounts Receivable

Sept 11	Forwarded	47	87	104	109
	Note Receivable	50	47		
		53	48		
		56	48		
		59	49		
30	Accts Receivable	103	88		
	Sales	92	82	55	57
	Accts Payable	103	67	65	61
			103	50	40
	Thos A Edinboro	105	103	115	105
	Sales		105	70	
		93	119	72	12
Oct 31	Accts Receivable	106	90		
	Accts Payable	107	146	65	65
	Thos A Edinboro	108	76	191	
	Accts Payable	116		33	
	Sales	95	127	50	23
	Accts Receivable	109	193	07	
			117	195	
	Accts Payable	111	10	193	51
	Thos A Edinboro		70	263	75
	Accts Payable	113	10	87	50
	Sales	97	109	37	58
		98	94	117	07
Jan 31	Accts Payable	119			
	Accts Receivable	115		890	
	Accts Payable	116	10	97	81
	Thos A Edinboro		50	460	64
	Accts Payable	511		16	
	Cash	78		117	
	Accts Receivable	178		79	
				1930	
				471	
	Sundries		70	96	
	Sales	101	19	207	85
	Personal Expense	118		1038	
	Accts Payable		58	08	32
		120	3	53	70
	Accts Receivable	121		70	00
		123		70	00
	Accts Payable		124		
		125	3	47	09

## Accounts Receivable

30	Balance	104	107	57	55
	Sales	106	11	00	70
	Accts Payable	127	11	49	15
April 30	Thos A Edinboro	127	11	49	15
	Sales	128	10	11	32
	Accts Receivable	128		130	
				130	
	Accts Payable	129	190	19	87
	Sales		213	70	
	Thos A Edinboro		75	75	10
May 11	Note Receivable	53		48	14
		51		48	12
	Sales	108	66	78	19
	Accts Payable	54		41	
	Accts Receivable	131		27	
	Accts Payable	132	8	45	19
	Thos A Edinboro		8	45	19
	Manufacturing	134		67	
	Accts Payable	134		78	53
	Thos A Edinboro		3	90	08
	Sales	107	64	29	00
		108	84	33	51
	Accounts Receivable	137		173	
				16	
				940	
	Accounts Payable	138		70	72
	Thos A Edinboro		48	55	75
	Sales	140		70	42
	Accounts Payable	22		43	
	Accounts Receivable	140		10	46
				59	
	Accounts Payable	141		79	11
	Thos A Edinboro	142		44	53
	Accounts Receivable	143		2	10
				08	
	Sales	118		89	58
	Thos A Edinboro	143		49	31
	Accts Receivable	146		14	00
				160	
				160	
	Sales	113		94	34
	Thos A Edinboro	146		10	41
	Accts Payable	50		37	
	Forwarded	50		11	47
		113		94	34
		146		10	41
	Accts Payable	50		37	
	Forwarded	50		11	47
		113		94	34
		146		10	41









## Edison Mfg Co. Interest ap

1909	Sept 29	Accts Payable	3712	3552.88	1909	Sept 29	Profit & Loss	3712	4114.73
			3712	3552.88					4114.73
				3552.88					4114.73
1910	May 30	Accts Payable	121	1070.05	1910	Sept 29	Profit & Loss	79	3579.68
	June 30		241	1210.64					
	July 31		381	1391.74					
	Aug 31		461	1572.84					
	Sept 30		601	1753.94					
	Oct 31		721	1935.04					
	Nov 30		841	2116.14					
	Dec 31		1071	2297.24					
				2297.24					
				3579.68					3579.68
1910	Sept 30	Accts Payable	1910	424.05	1910	Sept 30	Profit & Loss	51	2907.79
	Oct 31		2021	244.10					
	Nov 31		2251	1204.45					
	Dec 31		2271	578.61					
			2491	166.28					
				2707.79					2707.79
1910	March 31	Accounts Payable	2411	3300.00	1911	Sept 29	Profit & Loss	78	3415.81
	April 30		2700	3800.00					
	May 31		2791	4300.00					
	June 30		2981	4800.00					
	July 31		3081	5300.00					
	Aug 31		3181	5800.00					
	Sept 30		3301	6300.00					
	Oct 31		3401	6800.00					
	Nov 30		3501	7300.00					
	Dec 31		3611	7800.00					
			3711	8300.00					
				8300.00					3415.81

## Thomas A. Edison, Inc. Interest Account

Mar 30	Accts Payable	417.00	3066.98	Set 78	Profit Loss	1700.18	1844.65
July 31	"	437.00	1488.98				
Aug 31	"	441.00	1670.76				
Sept 30	"	452.00	2122.76				
Oct 31	"	461.00	2583.76				
Nov 20	"	476.00	3059.76				
Dec 30	"	486.00	3545.76				
Jan 31	"	498.00	4043.76				
Feb 29	"	511.00	4554.76				
			18323.50				

Mar 30	Accts Payable	550.00	10443.50	Set 78	Profit Loss	682.71	9468.00
April 30	"	543.00	10986.50				
May 31	"	541.00	11527.50				
June 29	"	555.00	12082.50				
July 31	"	175.00	12257.50				
Aug 31	"	73.00	12330.50				
Sept 30	"	36.00	12366.50				
Oct 31	"	50.00	12416.50				
Nov 30	"	61.00	12477.50				
Dec 31	"	76.00	12553.50				
Jan 31	"	89.00	12642.50				
Feb 28	"	101.00	12743.50				
			711968.00				

Mar 31	Accts Payable	115.00	761.43	Apr 30	Accts Payable	750.00	3011.70
Mar 31	"	138.00	899.43	Apr 30	"	707.00	3718.70
June 30	"	141.00	1040.43	Apr 30	"	700.00	4418.70
July 31	"	140.00	1180.43	Apr 30	"	715.00	5133.70
Aug 31	"	146.00	1326.43	Apr 30	"	715.00	5848.70
Sept 30	"	174.00	1500.43	Apr 30	"	715.00	6563.70
Oct 31	"	186.00	1686.43	Apr 30	"	715.00	7278.70
Nov 30	"	197.00	1883.43	Apr 30	"	715.00	8003.70
Jan 31	"	221.00	2104.43	Apr 30	"	715.00	8718.70
			6026.50				

Mar 31	Reg. of Dist.	740.00	11929.83
Apr 30	"	760.00	12689.83
May 29	"	716.00	13405.83
June 30	"	740.00	14145.83
July 31	"	811.00	14956.83
Aug 31	"	825.00	15781.83
Sept 30	"	841.00	16622.83

## Thomas A. Edison, Inc. Interest A/c

Set 27	Profit Loss	12477.62	Oct 31	Forwarded	60	9078.09
				Reg. of Dist.	354	8411.81
			Nov 30	"	366	8777.81
			Dec 31	"	382	9160.81
			Jan 30	"	399	9559.81
			Feb 27	"	418	9977.81
		12977.62				12877.62

May 31	Reg. of Dist.	480.00	12337.81	May 31	Reg. of Dist.	487.00	12824.81
June 30	General Expenses	117.00	12941.81	June 30	"	458.00	13282.81
			12441.81				13740.81

## Unclaimed Wages

1912	Mch	30	Accts Payable	500	700	Aug 9	Cash	126	8810
	Mar	31	"	541	700	Nov 26	"	9	14435
	Apr	30	"	555	770	Dec 21	"	40	15965
	Sept	30	"	36	2535				
	Oct	31	"	50	305				
	Nov	30	"	61	360				
	Dec	31	"	70	430				
	Jan	31	"	84	514				
	Feb	28	"	101	615				
			Profit Loss	127	21000				
					37110				37110

1913	Mch	31	Accts Payable	115	400	Apr 30	Cash	61	11310
	Apr	30	"	754	500	June 20	"	79	12135
	May	31	"	138	775	Sept 8	"	100	13135
	June	30	"	146	100	Oct 1	"	100	14135
	July	31	"	108	115	Jan 15	"	146	15600
	Aug	30	"	164	150				
	Sept	30	"	74	250				
	Oct	8	Cash	108	3155				
			Accts Payable	186	3265				
	Nov	30	"	197	345				
	Dec	31	"	271	355				
	Jan	31	"	234	395				
	Feb	28	"	216	417				
			Profit Loss	216	2407				
					37357				37357

1914	Mch	31	Reg of Wk	249	1630	April 18	Cash	28	12351
	Apr	30	"	262	1652	Sept 15	"	77	13131
	May	31	"	278	1685	Jan 13	"	115	13246
	June	30	"	285	1695	Jan 30	Reg of Wk	399	14645
	Sept	30	"	341	1727	Sept 25	Cash	126	14771
	Oct	31	"	254	1750				
	Nov	30	"	366	1816				
	Dec	31	"	382	1854				
	Jan	31	"	418	1933				
	Feb	27	"	275	2008				
			Profit Loss	275	3551				
					65446				65446

1915	Mar	31	Reg of Wk	447	10410	July 31	Cash	23	10433
	May	31	"	460	11020	Aug 3	"	3	11036
	July	31	"	477	11495	Sept 27	"	9	11505
	Aug	31	"	537	12032				
	Nov	30	"	627	12659				
			Forwarded						



## Unclaimed Wages

1916	Forwarded	372	1916	Forwarded	110.19
July 29	Profits + Loss	372	July 29	Profits + Loss	162.19

## Accounts Payable

1907		2012	2013	1907		2012	2013
March 31	Cash	2012	2013	March 31	General Ledger	3	1812
	Manufacturing	3312	100.00		Cash	204	1605.07
	Accounts Payable	3312	637.13		Accounts Payable	3312	637.13
	General Expenses	3312	1094.99		Accounts Receivable	1	1148.47
	Accounts Payable	3312	1094.99		Sundries	3312	153.64
April 30	Cash	2742	176.81	April 30	Cash	274	244.36
	Accounts Payable	3312	186.41		Accounts Payable	3312	126.42
	General Expenses	3312	1174.44		General Expenses	3312	55
	Accounts Payable	3312	108.85		Sundries	3312	246.30
May 31	Cash	3374	719.85		Accounts Receivable	3312	268.99
		3384	288.00	May 31	Dividends	3312	60.18
					Accounts Payable	3312	77.85
	General Expenses	3312	1716.18			3384	288.00
	Cash	3384	776.23				61.62
	Accounts Payable	3312	66.87		Cash	384	470.54
June 30	Cash	4712	184.78		Sundries	3312	12.79
	Accounts Payable	3312	100.00		General Expenses	3312	6.63
	General Expenses	3312	100.10	June 30	Cash	471	40.87
	Accounts Payable	3312	136.84		Accounts Payable	3312	400.00
July 31	General Expenses	3312	1176.24		Accounts Receivable	3312	126.89
	Accounts Payable	3312	337.13		General Expenses	3312	26
	Accounts Receivable	3312	215		Sundries	3312	8.54
	Freight In Advance	3312	1280.53	July 31	Accounts Payable	3312	26.13
	Freight In Advance	3312	9814.18		Sundries	3312	12.79
	Accounts Receivable	3312	1007.99		Cash	3312	12.79
	Accounts Payable	3312	1007.99	Aug 20	Dividends	3312	60.18
	Cash	3312	1007.99		Accounts Payable	3312	28.20
Aug 15	Accounts Receivable	3312	28.20		Accounts Receivable	3312	17.75
		3312	3.00	30	Cash	3312	26.86
		3312	71.64		Sundries	3312	36.37
30	General Expenses	3312	107		Accounts Payable	3312	12.79
30	Cash	3312	1000.31			3312	11.00
	Accounts Payable	3312	75.97			3312	11.00
	Accounts Receivable	3312	1000.31			3312	11.00
	Accounts Payable	3312	1000.31	Sept 30	Cash	3312	1000.31
		3312	1000.31		Sundries	3312	1000.31
		3312	1000.31		Cash	3312	1000.31
		3312	1000.31		Accounts Payable	3312	1000.31
Sept 30	Cash	3312	1000.31		Sundries	3312	1000.31
	General Expenses	3312	1000.31		Forwarded	3312	1000.31
	Accounts Payable	3312	1000.31			3312	1000.31
	Accounts Receivable	3312	1000.31			3312	1000.31
Oct 31	Cash	3312	1000.31			3312	1000.31
	Forwarded	3312	1000.31			3312	1000.31





## Accounts Payable

Nov 30	Forwarded	73126780002	Nov 30	Forwarded	73136707448
	Amount to balance	422		Cash	9
	Accts Receivable	934		Accts Receivable	44
		6320		Accts Payable	385
	Accts Payable	210		Sundries	44
Dec 31	Cash	9		Accts Payable	275
	Discount	76778		Forwarded	46
	Accts Receivable	44		Amount to balance	9111
		100000		Accts Payable	47
		24715			2155
	Accts Payable	385			17210
		225		Sundries	48
		166493		Accts Receivable	48
Jan 3	Amount to balance	46		Cash	18
	Accts Payable	47		Sundries	237
		25000		Cash	21
		2155		Accts Payable	49
	Accts Receivable	21490		Accts Receivable	49
	Cash	15		Accts Payable	207
	Discount	1217325		Sundries	239
	Accts Payable	207		Edison Storage, Ind. Co.	57
	Cash	27			4264593
	Discount	18273384			
	Accts Payable	49			
		15517			
	Accts Receivable	249			
	Profit Loss	51			
		133			
		200625636			
Feb 28	Cash	37			
	Discount	33697			
	Accts Receivable	55			
		2366			
	Accts Payable	214			
	Cash	2700			
	Discount	464			
	Cash	54			
	Discount	1088			
	Accts Payable	58			
		294			
	Cash	63			
	Accts Payable	61			
	Forwarded	75			
		1730			
		15347			

## Accounts Payable

Jan 30	Forwarded	74		Jan 30	Forwarded	74
	Accounts Payable	288			Accounts Payable	61
July 30	Cash	71			Sundries	388
	Discount	2176			Accts Receivable	61
	Accts Receivable	65			Edison Storage, Ind. Co.	71
	Accts Payable	298			Cash	61
	Cash	79			Accts Receivable	71
	Discount	2688			Edison Storage, Ind. Co.	61
	Accts Receivable	66			Sundries	298
	Accts Payable	1148			Cash	79
	Sundries	435677			Accts Payable	66
		9401			Sundries	308
	Accts Receivable	65			Cash	87
	Payable	308			Accts Receivable	318
	Cash	87			Cash	67
	Discount	1			Accts Payable	1
	Accts Receivable	67			Edison Storage, Ind. Co.	1
	Accts Payable	218			Ind. Co.	354
	Receivable	68			Cash	95
	Cash	95			Accts Payable	69
	Discount	1			Accts Receivable	70
	Accts Payable	69			Edison Storage, Ind. Co.	1
		2616			Sundries	330
	Accts Receivable	70			Cash	103
	Accts Payable	308			Accts Payable	340
	Cash	103			Accts Receivable	71
	Discount	1			Edison Storage, Ind. Co.	111
	Accts Payable	340			Cash	111
	Accts Receivable	71			Accts Payable	72
	Cash	111			Accts Receivable	80
	Discount	1			Edison Storage, Ind. Co.	1
	Accts Payable	353			Sundries	353
	Cash	119			Cash	119
	Discount	1			Accts Receivable	74
	Accts Receivable	74			Accts Payable	74
	Accts Payable	361			Edison Storage, Ind. Co.	1
	Manufacturing	117			Sundries	361
	Cash	117			Cash	117
	Discount	1			Accts Receivable	74
	Accts Payable	374			Accts Payable	74
	Manufacturing	117			Edison Storage, Ind. Co.	1
	Forwarded	16			Sundries	374
		327			Accts Payable	74
		10666			Forwarded	74



## Accounts Payable

Jan	31	Forwarded	77,165,042.43
		Accts Receivable	115,711,453.21
Feb	29	Accts Payable	514,263,062.2
		Cash	78,149,764.01
		Discount	49,336
		Accts Receivable	119,117,266.32
		Accts Payable	312,310,20
		Cash	116
		Discount	179
		Accts Receivable	540
		Profit Loss	315
		Profit Loss	123,46
		Profit Loss	1,000,000
		Profit Loss	19,024,597.20
Mar	30	Cash	86,124,997.18
		Discount	57,192
		Accts Payable	574,707,091
		Accts Receivable	174,21,600.07
April	1	Note Receivable	78,770,080.5
	30	Cash	96,163,974.38
		Discount	84,900
		Accts Receivable	178,673,802
		Accts Payable	179,18,553
		Cash	47,389.93
		Manufacturing	533,308,973
May	31	Cash	105,173,111.01
		Discount	81,755
		Accts Payable	544,756,210
		Manufacturing	117
		Accts Receivable	135,354,973
		For Return Fund	131,792,197
		Accts Payable	49,76
		Edison Storage Bldg	135,13,66
		Accts Receivable	88,56,93
		Accts Payable	134,13,747.5
		Cash	555,23,067.2
		Discount	114,170,817.14
		Accts Payable	134,916.7
		Accts Receivable	135,60
July	31	Forwarded	74,11,350,880
		Cash	110,324,347.4

Jan	31	Forwarded	77,165,042.43
		Sundries	511,795,101
Feb	29	Cash	78,149,764.01
		Accts Receivable	118,381,083.22
		Accts Payable	119,343,020.20
		Cash	116
		Edison Storage Bldg	833,38
		Accts Payable	120,520
		Accts Receivable	31,31,029.22
		Edison Storage Bldg	173,103,86
		Accts Receivable	173,103,86
		Cash	19,024,597.20
Mar	30	Balance	86,124,997.18
		Cash	86,124,997.18
		Sundries	574,707,091
		Accts Receivable	174,21,600.07
		Edison Storage Bldg	178,770,080.5
		Note Receivable	53,770,080.5
		Cash	96,163,974.38
		Accts Payable	179,18,553
		Cash	47,389.93
		Accts Receivable	178,673,802
		Edison Storage Bldg	179,18,553
		Sundries	533,308,973
		Cash	105,173,111.01
		Discount	81,755
		Accts Payable	544,756,210
		Manufacturing	117
		Accts Receivable	135,354,973
		For Return Fund	131,792,197
		Accts Payable	49,76
		Edison Storage Bldg	135,13,66
		Accts Receivable	88,56,93
		Accts Payable	134,13,747.5
		Cash	555,23,067.2
		Discount	114,170,817.14
		Accts Payable	134,916.7
		Accts Receivable	135,60
June	30	Forwarded	74,11,350,880
		Cash	110,324,347.4
July	31	Forwarded	74,11,350,880
		Cash	110,324,347.4

## Accounts Payable

July	31	Forwarded	78,117,042,59
		Discount	123,677,29
		Accts Payable	178,271,037
		Accts Receivable	137,879,77
		Cash	60
		Edison Storage Bldg	136,279,146
		Accts Payable	876,33
		Cash	755,75
		Discount	102,167,67.09
		Accts Payable	102,167,67.09
		Accts Receivable	141,12,805
		Accts Payable	900
		Manufacturing	1843,00
		Edison Storage Bldg	142,27,026.04
		Cash	141,141,694.3
		Discount	846,00
		Accts Receivable	143,774,161
		Accts Payable	161,139,852
		Cash	144,146,2
		Cash	618,19
		Discount	151,199,540.72
		Accts Receivable	147,17,350.23
		Accts Payable	50,20,100.07
		Accts Receivable	147,17,350.23
		Cash	11,181,142,19
		Discount	1,103,28
		Accts Receivable	150,375,217
		Accts Payable	61,351,457
		Cash	21,110,055.37
		Discount	11,557.9
		Accts Payable	76,447,322
		Accts Receivable	153,245,149
		Accts Payable	154,1,00
		Cash	31,225,886.26
		Discount	10,254.1
		Accts Payable	89,371,067
		Accts Receivable	154,188,267
		Accts Payable	102,11,50
		Forwarded	80,707,062.10
		Cash	39,117,137

July	31	Forwarded	78,831,350,880
		Cash	135,354,973
		Sundries	231,586,588
		Accts Payable	141,900
		Accts Receivable	79,11,191
		Cash	141,11,191
		Sundries	361,124,794.72
		Accts Payable	141,11,191
		Cash	618,19
		Edison Storage Bldg	151,7,351.43
		Cash	151,7,351.43
		Sundries	501,66,807.27
		General Expense	306,001
		Sundries	147,27,642.50
		Cash	11,226,779.7
		Sundries	61,196,770.63
		Cash	150,10,000.00
		Note Receivable	607,15,442.5
		Cash	211,602.58
		Sundries	767,079,152.6
		Cash	154,13,135.82
		Accts Payable	317,7,351.43
		Cash	89,18,556.26
		Sundries	612,11,771.59
		Note Receivable	154,7,351.43
		Accts Payable	157,15,554.49
		Sundries	157,15,554.49
		General Expense	157,15,554.49
		Accts Payable	166,15,554.49
		Forwarded	80,707,062.10
		Cash	39,117,137

## Accounts Payable

1912		1913			
Feb 28	Forwarded	79 197 12 25 62	Feb 28	Forwarded	74 787 74 10 12
	Accts Payable	201 273 47 78		Sundries	10 170 57 19 48
	Cash	41 193 56 09		Cash	41 130 77 77
	Discount	91 0 44		Accts Payable	164 300 00
	Accts Payable	164 300 00		Profit Loss	164 153 60
		164 153 60		Accts Payable	164 9 16
		88 90			164 16
	Accts Receivable	162 11 55 13		Accts Payable	164 88 90
	Accts Payable	164 11 55 13		Sundries	164 3 11 55 13
	Sundries	101 11 55 13		Thos. A. Davidson	164 3 11 55 13
		73 155 65 91			23 155 65 91
Mar 31	Accts Payable	74 1 79 75	Mar 31	Accts Payable	174 1 09 50 15
	Accts Receivable	75 753 74 8		Sundries	174 2 11 75
	Cash	51 119 79 57 70		Cash	51 17 48 10 1
	Discount	91 4 91		Sundries	51 28 1 08
	Accts Payable	115 345 9 08			115 19 75 9 75
Apr 30	Accts Receivable	177 2 11 67 41	Apr 30	Cash	177 16 75 17
	Cash	64 2 11 67 41		Sundries	64 2 11 67 41
	Discount	1 10 75 31		Accts Payable	181 75 31
	Accts Payable	181 3 18 61		Sundries	181 88 90
		181 88 90		Cash	71 11 75 31
May 31	Accts Payable	71 11 75 31	May 31	Accts Payable	138 19 30 79 99
	Cash	71 11 75 31		Sundries	138 19 30 79 99
	Discount	1053 75		Cash	138 19 30 79 99
	Accts Payable	138 19 30 79 99		Accts Payable	138 19 30 79 99
June 1	Accts	138 19 30 79 99	June 30	Accts	138 19 30 79 99
	Cash	138 19 30 79 99		Cash	138 19 30 79 99
	Discount	138 19 30 79 99		Accts Payable	138 19 30 79 99
	Accts Payable	138 19 30 79 99		Sundries	138 19 30 79 99
		138 19 30 79 99			138 19 30 79 99
July 31	Accts Payable	138 19 30 79 99	July 31	Accts Payable	138 19 30 79 99
	Cash	138 19 30 79 99		Cash	138 19 30 79 99
	Discount	138 19 30 79 99		Accts Payable	138 19 30 79 99
	Accts Payable	138 19 30 79 99		Sundries	138 19 30 79 99
		138 19 30 79 99			138 19 30 79 99
81	Forwarded	81 105 00 1 65 91			

## Accounts Payable

July 31	Forwarded	80 945 139 39	July 31	Forwarded	80 1050 0 165 24
19	Accts Payable	68 177 5 01	Aug 30	Sundries	198 11 55 5 14
12	"	81 177 5 01	"	Cash	98 2 16 23
26	"	262 20 77	"	Sundries	164 12 9 06 51
1	"	111 11 91	Sept 30	"	95 12 9 06 51
10	"	80 4 40	"	Accts Payable	107 1 2 67
12	"	112 1 15	"	Cash	107 6 8 9 7
11	"	67 54 04 86	"	Sundries	174 16 7 8 24 18
21	"	68 24 00 32	Oct 1	Accounts Receivable	198 11 55 5 14
27	"	2400 32	"	Sundries	186 70 5 7 6 89
21	"	142 96	"	Cash	118 7 7 10
"	"	51 75 05	"	Sundries	700 17 5 4 32
"	"	44 60 19	Nov 29	Accts Payable	700 20 4 72
15	"	69 65 0 53	"	Sundries	700 27 5 19 39
"	"	145 2 59	"	Sundries	197 18 8 4 58
"	"	9 57 26	"	Cash	75 20 4 30
20	"	38 9 50	"	"	11 11 1 1
"	"	57 4 93			
28	"	38 0 47			
"	"	11 9 41 0			
26	"	68 3 94			
28	"	12 38 81			
30	Accounts Receivable	91 7 11 70			
"	"	700			
"	Cash	98 1 07 03 75			
"	Discount	11			
Sept 30	Accts Payable	164 4 78 31			
"	Cash	107 15 26 62 4			
"	Discount	20 62			
"	Accts Payable	174 5 19 5 10			
"	"	195 12 67			
"	Accts Receivable	107 15 26 62 4			
Oct 27	Accts Payable	71 5 14 27			
"	"	164 4 78 31			
31	Accts Payable	199 1 13 3 94			
"	Cash	118 19 1 19 7 45			
"	Discount	76 7 45			
"	Accts Payable	199 1 13 3 94			
Nov 29	Accts Payable	700 30 4 34			
"	Accts Receivable	71 5 14 27			
"	Accts Payable	197 7 45 8 67			
"	Cash	78 17 4 1 12			
"	Discount	10 1 1 1 1			



## Accounts Payable

1913		1914	
Nov 29	Forwarded	81	1807
20	Notes Payable	206	16715
19	"	"	16715
17	"	"	85371
11	"	"	88114
18	"	"	174551
Dec 4	Accts Receivable	205	104472
31	"	207	500
"	"	"	110072
"	Cash	129	140801
"	Miscout	"	2037
"	Accts Payable	207	146500
16	Notes Payable	71	500000
"	"	72	561808
17	"	73	365084
13	"	"	155392
22	"	"	220384
20	"	"	168038
15	"	"	319782
20	"	"	172847
27	"	"	217479
27	"	"	241940
16	"	"	150000
Jan 31	Cash	149	170561
"	Accts Payable	211	50188
"	Accts Receivable	"	68879
"	Accts Payable	211	471970
Feb 28	Cash	226	733767
"	Miscout	10	2220160
"	Accts Receivable	210	89924
"	Accts Payable	210	7355
"	"	"	1900115
"	Thos A. Edwards	22	87952
"	Balance	"	14150025
		249725679	
Mar 31	Accts Receivable	225	46896
"	Cash	21	17569453
"	Miscout	"	1224
"	Reg of Dist	204	496969
Apr 20	Cash	207	291614
"	"	217	11150
May 29	Forwarded	81	1807
31	Notes Payable	206	16715
"	Cash	129	140801
"	Sundries	207	187885
"	Cash	149	170561
"	Miscout	"	2037
"	Sundries	211	142410
"	Accts Payable	"	50188
"	General Expense	"	20000
"	Sundries	214	273211
Feb 27	Notes Payable	71	500000
"	General Expense	71	25500
"	Sundries	72	197291
"	Cash	10	21904
"	Sundries	216	274156
"	Profit Loss	"	8890
"	Accts Payable	216	7355
"	"	"	1900115
May 29	Forwarded	81	1807
31	Notes Payable	206	16715
"	Cash	129	140801
"	Sundries	207	187885
"	Cash	149	170561
"	Miscout	"	2037
"	Sundries	211	142410
"	Accts Payable	"	50188
"	General Expense	"	20000
"	Sundries	214	273211
Feb 27	Notes Payable	71	500000
"	General Expense	71	25500
"	Sundries	72	197291
"	Cash	10	21904
"	Sundries	216	274156
"	Profit Loss	"	8890
"	Accts Payable	216	7355
"	"	"	1900115
May 29	Forwarded	81	1807
31	Notes Payable	206	16715
"	Cash	129	140801
"	Sundries	207	187885
"	Cash	149	170561
"	Miscout	"	2037
"	Sundries	211	142410
"	Accts Payable	"	50188
"	General Expense	"	20000
"	Sundries	214	273211
Feb 27	Notes Payable	71	500000
"	General Expense	71	25500
"	Sundries	72	197291
"	Cash	10	21904
"	Sundries	216	274156
"	Profit Loss	"	8890
"	Accts Payable	216	7355
"	"	"	1900115
May 29	Forwarded	81	1807
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"	General Expense	"	20000
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Feb 27	Notes Payable	71	500000
"	General Expense	71	25500
"	Sundries	72	197291
"	Cash	10	21904
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"	Profit Loss	"	8890
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"	"	"	1900115
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"	Accts Payable	"	50188
"	General Expense	"	20000
"	Sundries	214	273211
Feb 27	Notes Payable	71	500000
"	General Expense	71	25500
"	Sundries	72	197291
"	Cash	10	21904
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"	Profit Loss	"	8890
"	Accts Payable	216	7355
"	"	"	1900115
May 29	Forwarded	81	1807
31	Notes Payable	206	16715
"	Cash	129	140801
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"	Cash	149	170561
"	Miscout	"	2037
"	Sundries	211	142410
"	Accts Payable	"	50188
"	General Expense	"	20000
"	Sundries	214	273211
Feb 27	Notes Payable	71	500000
"	General Expense	71	25500
"	Sundries	72	197291
"	Cash	10	21904
"	Sundries	216	274156
"	Profit Loss	"	8890
"	Accts Payable	216	7355
"	"	"	1900115

## Accounts Payable

1913		1914	
Apr 20	Forwarded	81	1807
"	Miscout	324	855
"	Accts Receivable	271	90526
"	Payable	"	471442
"	Sundries	"	6342221
May 29	Reg of Dist	278	512390
"	Accts Receivable	271	77166
"	Cash	417	1058875
"	Miscout	"	2037
"	Accts Payable	234	10815
"	Cash	507	10815
"	Miscout	"	2037
"	Accts Receivable	234	971601
"	Sundries	241	274156
"	Reg of Dist	241	274156
"	Insurance	241	274156
July 31	Accts Receivable	236	4426
"	Payable	287	8734
"	"	"	279408
"	"	"	175
"	Cash	59	25018628
"	Miscout	"	39269
Aug 31	Accts Receivable	240	10815
"	Reg of Dist	375	362205
"	"	"	344
"	Cash	69	223731517
"	Miscout	"	16531
Sept 30	Accts Receivable	243	56911623
"	"	"	550
"	Sundries	241	65569
"	Accts Payable	246	236071
"	"	"	19194
"	Cash	78	27001471
"	Miscout	"	27768
"	Reg of Dist	241	309410
"	"	"	514
Oct 20	Notes Payable	81	1807
"	"	82	331200
"	"	"	309600
"	"	"	219452
"	"	83	237356
"	"	15	237356
"	"	20	237356



## Accounts Payable

1915		1916		1917	
Feb	17	Forwarded	85		
		Accts Payable	76	1000	
	"	"	"	1500	
	"	"	76	2367335	
	"	Sundries	"	12046919	
	"	Accts Payable	76	11736	
	"	Accts Payable	8	300000	
	73	"	"	209166	
	16	"	"	136506	
	76	"	"	247635	
	3	"	86	154441	
	14	"	8	355800	
	70	"	"	190468	
	18	"	"	698082	
	11	"	"	757193	
	15	"	"	306875	
	19	"	"	389061	
	73	"	"	468964	
	11	"	"	114644	
	73	"	"	112345	
	17	"	"	111943	
	74	"	"	136975	
	26	"	"	549450	
	27	"	"	241878	
	75	"	"	158958	
		"	"	1586	
	27	Balance	"	22443741	
				45324657	

1915				1915			
Mar 31	Reg. of Dist	487.	1,007.27	Mar 1	Balance		224,437.11
"	"	"	26.30	31	Reg. of Dist.	487.	324,886.50
19	Notes Payable	36.	2,107.34	"	Abstract of Sale	4.	20,873.15
20	"	88.	5500.00	"	Cash	187.	122,936.11
17	"	"	192,354	"	Thomas A. Edison, Inc	250.	4,551.85
23	"	"	148,99.93	"	Accts. Payable	230.	129,444.71
15	"	"	22,86,914	"	Thomas A. Edison, Inc	251.	126.15
16	"	"	2347.19	"	Surplus	"	2,246,757.15
"	"	"	1513.23	"	U. S. Gov. Inc Tax ac	253.	1,110,777.11
24	"	"	621,537	Apr 30	Abstr. of Sale	11.	7,744.87
26	"	"	2,561.82	"	Surplus	255.	40,750.61
9	"	"	54,86.53	"	Accts. Payable	"	12,711,349.
7	"	"	1,883.78	"	Cash	448.	87,883.01
12	"	"	24,197.1	"	Regist. of Dist.	487.	360,918.32
"	"	"	16,707.34	"	Surplus	258.	12,121,267.66

## Accounts Payable

Forwarded		46 8175179		Forwarded		120 7516153	
Mar 20	Notes Payable	88	1665.60	May 31	Cash	10	6117.42
23		89	8340.80		Register of Debit	100	23944.36
31	Cash	108	2231.37		Accts. Payable	291	110
	Cash Discount		71.376				66
	Accts. Receivable	230	2.00		Accts. Receivable		52.81
			472.66		Accts. Payable		702.91
	Accts. Payable		12344.71		Substains	292	14525.70
	Pine Loh	252	18395.72		Accts. Payable		4185.80
	"	213	20373.65		Pine Loh		15276.18
Apr 12	Notes Payable	57	5749.16				
22			1662.00				
14		88	4518.00				
1		89	3962.75				
13			2309.43				
21			4746.40				
16			4000.00				
20			3611.19				
17			3297.20				
"			1324.86				
9			1669.00				
21			2724.10				
26			1539.13				
27			1646.50				
28			2000.00				
5		90	2859.76				
10			3089.44				
7		86	2294.67				
30	Accts. Payable	285	12715.47				
	Pine Loh		37218.69				
	Accts. Receivable	286	5755.21				
	Cash	108	290157.65				
	Cash Discount		369.88				
	Register of Debit	105	12814.80				
			925				
	T.R. Edison Inc.	286	33339				
May 11	Notes Payable	89	25000.00				
12			1089.29				
11			5000.00				
10			5000.00				
30			15944.92				



## Accounts Payable

1912		1913	
July 2	Forwarded	July 2	Forwarded
Cash	28 258 53 52	29 Cash	29 315 31 51
Cash Discount	200 90	Inter. Exp.	31 51
Int'l. Discount	11 63	Accounts Payable	320 31 51
Surpluses	202 12 29 53 30	"	371 20 00
Cash Payable	12 22 3 18	Cash	10 12 3 4 18
"	23 1 99 6	Reg. of Dist.	243 6 73 0 00 4 9
"	138 12	"	219 4 1 5 23
Reg. of Dist.	517 2 14 5 73	Accts. Receivable	312 37 4
"	5 53 1 06	Payable	374 883 90
Aug 31 Accts. Receivable	306 5 50 7	Surpluses	374 883 90
"	22 75	Cash Payable	352 4 1 5 29 5 71
1 20th Payable	94 1 00 0 00	Int'l. Discount	1 5 15 8 7 7 4
"	11 7 4 3	Forwarded	23 6 1 5 7 1
6	2 11 1 7 5		
14	16 4 0 0		
25	16 00 0 0		
10	11 43 2 6		
16	16 07 3 4		
28	10 70 1 7		
1	23 43 7 1		
7	1 00 7 5 1		
20	19 40 6 4		
11	40 00 0 0		
11	5000 0 0		
23	5000 0 0		
14	5000 0 0		
9	5000 0 0		
21	5000 0 0		
11	5000 0 0		
23	5000 0 0		
18	10 42 11		
10	10 11 0 6		
21	10 59 2 2		
20	10 47 0 0		
31 Cash	25 12 5 7 1 63		
Cash Discount	10 9 2		
Int'l. Discount	5 7 3		
Payable	318 2 10 1 0 4		
Surpluses	318 10 6 7 7 5		
Forwarded	318 1 1 6 9 8		
"	10 6 5 1 9 3		

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## Accounts Payable

1912		1913	
July 2	Forwarded	July 2	Forwarded
11 Inter. Discount	31 51 1 9 5	11 Inter. Discount	31 51 1 9 5
Reg. of Dist.	517 30 20 5 1	Reg. of Dist.	517 30 20 5 1
"	6 43	"	6 43
Thomas A. Edison, Inc.	310 23 11 0 40 1	Thomas A. Edison, Inc.	310 23 11 0 40 1
Inter. Discount	1 5 15 8 7 7 4	Inter. Discount	1 5 15 8 7 7 4
Accts. Receivable	309 76 31 1	Accts. Receivable	309 76 31 1
20 20th Payable	94 1 00 0 00	20 20th Payable	94 1 00 0 00
"	93 23 6 1 5 2 6	"	93 23 6 1 5 2 6
8 20th Payable	94 1 00 0 00	8 20th Payable	94 1 00 0 00
15	5000 0 0	15	5000 0 0
22	5000 0 0	22	5000 0 0
29	5000 0 0	29	5000 0 0
30	5000 0 0	30	5000 0 0
15	5000 0 0	15	5000 0 0
18	5000 0 0	18	5000 0 0
16	5000 0 0	16	5000 0 0
17	5000 0 0	17	5000 0 0
8	5000 0 0	8	5000 0 0
15	5000 0 0	15	5000 0 0
22	5000 0 0	22	5000 0 0
29	5000 0 0	29	5000 0 0
30	5000 0 0	30	5000 0 0
"	10 6 5 1 9 3	"	10 6 5 1 9 3
Surpluses	10 1 5	Surpluses	10 1 5
20 20th Payable	4000 0 0	20 20th Payable	4000 0 0
20	4000 0 0	20	4000 0 0
27	4000 0 0	27	4000 0 0
12	21 57 40	12	21 57 40
31 Reg. of Dist.	501 3 4 5 1 53	31 Reg. of Dist.	501 3 4 5 1 53
Cash	24 23 1 5 0 9	Cash	24 23 1 5 0 9
Surpluses	41 21 5 1 1 8	Surpluses	41 21 5 1 1 8
Reg. of Dist.	501 3 4 5 1 53	Reg. of Dist.	501 3 4 5 1 53
14 20th Payable	40 41 5 0	14 20th Payable	40 41 5 0
18	21 64 3 6	18	21 64 3 6
11	5000 0 0	11	5000 0 0
20	5000 0 0	20	5000 0 0
15	5000 0 0	15	5000 0 0
31 I. & L. Inc.	21 64 3 6	31 I. & L. Inc.	21 64 3 6
Forwarded	21 64 3 6	Forwarded	21 64 3 6
"	1 6 4 3 7 2	"	1 6 4 3 7 2



## General Expense

March 1	From General Ledger	3	102	27	18	March 30	Cash	15	1	18	81
9	Accts Receivable	281	1		678	31	Accts Payable	232	1	199	588
10	"	"	1		2	30	Cash	25	0	8	30
"	"	"	"		741	31	Accts Payable	228	1	61	71
19	"	"	"		900	31	"	228	1	61	71
30	"	"	"		540	July 31	Cash	60	1	5	11
"	"	251	1		9198	"	Accts Payable	228	1	100	10
"	"	"	"		120	00	July 31	"	58	1	11
"	"	228	1		64	41	Forwarded	325	1	55	66
"	Accts Payable	228	1		578	0	37				
"	Manufacturing	"	"		128	0	669				
Apr 30	Accts Receivable	228	1		708						
"	"	"	"		6	1	325				
"	"	"	"		18	08					
"	"	228	1		68	15					
"	Accts Payable	"	"		85						
"	Accts Receivable	"	"		100	00					
"	Manufacturing	228	1		348	59					
"	Accts Payable	228	1		44	46	49				
"	Manufacturing	228	1		12	10	24				
May 31	Accts Receivable	228	1		125	00					
"	"	228	1		18	27	1				
"	"	228	1		69	88	1				
"	"	228	1		66	64	1				
"	Cash	228	1		03	1					
"	Manufacturing	228	1		14	26	05				
"	Accts Payable	"	"		11	29	29				
"	"	228	1		5	63					
June 30	Manufacturing	228	1		100	00					
"	Accts Receivable	228	1		409	28	1				
"	"	"	"		77	00	1				
"	"	228	1		100	00	1				
"	"	"	"		79	71	1				
"	Accts Payable	"	"		26	1					
"	"	"	"		55	70	00				
"	Manufacturing	"	"		69	06	67				
July 31	Accts Rec	228	1		120	00	1				
"	"	228	1		57	86	1				
"	"	"	"		48	44	1				
"	Manufacturing & Tools	"	"		2	47					
"	"	228	1		10	100	1				
"	Manufacturing	"	"		8	37	30				
"	Accts Payable	"	"		3	88	76				
"	Forwarded	"	"		69	88	1				
		228	1		13	88					





## General Expense

1904		1905		
Nov. 30	Forwarded	101 411 100 00	Nov. 30 Forwarded	101 154 41 19
	Manufacturing	85 115 57 59	Dec. 31	Wages of Sales
Dec. 31	Balance	97 46 56		Discount
	Credit Payable	96 55 57 45	Jan. 30	Wages of Sales
	Manufacturing	11 11 77 00		Discount
Jan. 30	Credit Receivable	24 100 00	Feb. 28	Credit of Sales
	Discount	106 64 67		Manufacturing
	Credit Payable	107 42 50 15		Credit Payable
	Manufacturing	11 11 77 00		Credit of Sales
	Discount	11 11 77 00		Sales P
Feb. 28	Credit Receivable	24 100 00		Manufacturing
	Credit Payable	120 57 04 01		
	Manufacturing	66 32 22		Balance
		27 105 24		
		28 105 24		
		58 336 37		
		58 336 37		

1949				1948				
Mar		1 Balance	16,247.24	Mar 31	Account	125.50	6,221.15	
31		Accts Payable	129.46	36,448.75	Apr 1	Write of Sales	492.47	2,811.98
		Manufacturing		4,255.09	30	Account	504.47	92.88
			31.4	3,601.17		Account	133.47	7,159.94
		Accts Receivable	33.4	100.00	May 31	Insurance Received	35.4	23,602.4
		Account	125.50	8,645.88		Write of Sales	516.47	11,164.44
Apr 30		Accts Receivable	34.4	125.00		Account	141.47	16,583.33
		Account	133.4	42.01	June 30	Write of Sales	524.47	78,927.1
		Accts Payable	140.4	26,031.35		Account	149.47	6,657.78
		Manufacturing		4,854.95	July 31		157.4	47,109.50
May 31		Accts Receivable	35.4	100.00		Write of Sales	540.47	68,471.1
		Accts Payable	150.4	25,664.20	Aug 31	Account	166.47	6,251.08
		Manufacturing		40,700.40		Forwarded	103,205.77	1,064,111.11
		Account	141.4	44.57				
June 30		Accts Receivable	36.4	100.00				
		Accts Payable	160.4	27,270.73				
		Manufacturing		69,936.61				
		Account	149.4	64.13				
July 31			157.4	74.17				
		Accts Payable	172.4	46,504.50				
		Manufacturing		315,900.00				
		Accts Receivable	37.4	125,000.00				
Aug 31			38.4	100,000.00				
		Forwarded	103	550,021.1				
			211	1,211,125.00				

General Expense

Aug 31	Forwarded	102	2,087	71.04	Aug 31	Forwarded	102	5,500.21
	Discount	166	405.57		Sept 30	Chet. of Sales	565	164.98
	Chet. of Sales	554	405.57			Discount	175	473.11
	Chet. Payable	151	23,555.72		Oct 30	Chet. of Sales	582	401.74
	Manufacturing	4	385.56			Discount	154	1,130.78
Sept 30	Chet. Receivable	394	125.00		Nov 30	Chet. of Sales	596	1,036.62
	Discount	175	55.29			Discount	193	665.37
	Chet. Payable	1402	24,813.36		Dec 31	Account Payable	9	39.11
	Manufacturing	1	92.58			Discount	42	767.78
Oct 30	Chet. Receivable	440	1,000.00		Jan 31	Chet. of Sales	612	1,118.95
	Chet. Payable	202	12,129.00			Discount	15	1,217.24
	Manufacturing	182	7129.00		Feb 28	Chet. of Sales	627	1,264.92
	Discount	193	65.16			Chet. Pay. (Discount)	27	77.55
Nov 30	Chet. Receivable	433	1,000.00			Chet. of Sales	649	1,281.87
	Account Payable	213	37,378.96			Sales	65	112.02
	Manufacturing	9	7,124.61			Manufacturing	57	707.99
	Discount	1	39.54			"	52	656.49
Dec 31	Account Receivable	462	12,500.00			"	53	52.31
	Account Payable	325	29.21			"	58	1,014.76
	Manufacturing	46	1,199.99			Balance	19	19,000.77
Jan 28	Chet. Receivable	446	2,271.05					
	Discount	18	100.00					
	Manufacturing	236	6,099.36					
Feb 28	Chet. Payable	237	43,525.36					
	Account Receivable	49	1,000.00					
	Chet. Receivable	27	45.57					
	Chet. Payable	249	1,522.09					
	Manufacturing	47	594.09					
		47	160.80					

				1910			
1910	1	Balance	199	93	72	31	Discount
Mar	31	Discount	37	52	76	31	Write of Sales
		Account Receivable	55	125	00	30	Discount
		Account Payable	214	54	11	31	Write of Sales
		Manufacturing		5	99	31	Discount
April	30	Account Receivable	51	100	00	31	Sales
		Acc't Payable	214	35	59	31	Forwarded
		Manufacturing		51	12	30	
		Discount		46	11	31	
May	31	"		52	4	31	
		Account Receivable	58	100	00		
		Forwarded	104	88	63		



General Expense

[illegible]

General Expense

1913		1913	
Oct 31	Forwarded	106	100 48
"	Account Payable	11	100 48
"	Manufacturing	145 7	111 59
"	Sundries	61	144 91
Nov 30	Discount	71	1 55 39
"	Accts Payable	151 2	108 51
"	Manufacturing	76	31 23
"	Sundries	159	159 23
Dec 31	Discount	154	100 00
"	Accts Payable	164	90 85
"	Manufacturing	31	100 41
"	Sundries	89	31 43
Jan 31	Discount	101	1 55 39
"	Accts Payable	41	910 44
"	Manufacturing	1731	111 09
"	Sundries	165	55 05
Feb 28	Discount	167	16 44 2
"	Accts Payable	168	15 41 80
"	Manufacturing	1704	18 21 08
"	Sundries	511	101 26
Mar 31	Discount	51	9149 1
"	Accts Payable	115	63
"	Manufacturing	76	53 15
"	Sundries	191	703 49
Apr 30	Discount	61	105 51
"	Accts Payable	25	25
"	Manufacturing	78	100 15
"	Sundries	71	460 73
May 31	Discount	149	17 65 8
"	Accts Payable	128	58
"	Manufacturing	104	22 25
"	Sundries	224	20 25
June 30	Discount	20	40 25
"	Accts Payable	104	10 25
"	Manufacturing	104	10 25
"	Sundries	104	10 25
July 31	Discount	104	10 25
"	Accts Payable	104	10 25
"	Manufacturing	104	10 25
"	Sundries	104	10 25
Aug 31	Discount	104	10 25
"	Accts Payable	104	10 25
"	Manufacturing	104	10 25
"	Sundries	104	10 25
Sept 30	Discount	104	10 25
"	Accts Payable	104	10 25
"	Manufacturing	104	10 25
"	Sundries	104	10 25
Oct 31	Discount	104	10 25
"	Accts Payable	104	10 25
"	Manufacturing	104	10 25
"	Sundries	104	10 25
Nov 30	Discount	104	10 25
"	Accts Payable	104	10 25
"	Manufacturing	104	10 25
"	Sundries	104	10 25
Dec 31	Discount	104	10 25
"	Accts Payable	104	10 25
"	Manufacturing	104	10 25
"	Sundries	104	10 25
Jan 31	Discount	104	10 25
"	Accts Payable	104	10 25
"	Manufacturing	104	10 25
"	Sundries	104	10 25
Feb 28	Discount	104	10 25
"	Accts Payable	104	10 25
"	Manufacturing	104	10 25
"	Sundries	104	10 25
Mar 31	Discount	104	10 25
"	Accts Payable	104	10 25
"	Manufacturing	104	10 25
"	Sundries	104	10 25
Apr 30	Discount	104	10 25
"	Accts Payable	104	10 25
"	Manufacturing	104	10 25
"	Sundries	104	10 25
May 31	Discount	104	10 25
"	Accts Payable	104	10 25
"	Manufacturing	104	10 25
"	Sundries	104	10 25
June 30	Discount	104	10 25
"	Accts Payable	104	10 25
"	Manufacturing	104	10 25
"	Sundries	104	10 25
July 31	Discount	104	10 25
"	Accts Payable	104	10 25
"	Manufacturing	104	10 25
"	Sundries	104	10 25
Aug 31	Discount	104	10 25
"	Accts Payable	104	10 25
"	Manufacturing	104	10 25
"	Sundries	104	10 25
Sept 30	Discount	104	10 25
"	Accts Payable	104	10 25
"	Manufacturing	104	10 25
"	Sundries		



## General Expense

Sept 1	Forwarded	109	36	1704.38	Sept 1	Forwarded	109	105	1678
30	Surinder	78	7352.65	30	Abt. of Sales	131	68	1013	
"	Discount	78	148.02	"	Discount	78	277	1.8	
"	Reg. of Dist.	241	3470.79	"	Reg. of Dist.	240	373	19	
Oct 23	Cash	83	860.00	Oct 31	Abt. of Sales	364	678	15	
31	Discount	83	21.57	"	Discount	89	266	72	
"	Reg. of Dist.	354	4603.66	"	Reg. of Dist.	353	553	12	
"	Surinder	74	6571.78	Nov 30	"	365	118	14	
"	Don A. Schindler	74	7343.55	"	Abt. of Sales	137	118	90	
Nov 30	Reg. of Dist.	366	1113.50	"	Discount	99	113	75	
"	Discount	99	7679.41	"	Manufacturing	109	112	10	
Surinder	753	1113.50	"	Discount	118	117	15		
Cash	105	7343.81	Dec 30	Accts Payable	261	377	73		
Reg. of Dist.	387	37152.81	Feb 2	Abt. of Sales	134	347	61		
"	Discount	756	360.09	"	Discount	37	565	50	
"	Reg. of Dist.	109	3452.77	"	Manufacturing	273	119	11	
"	Manufacturing	701	47.34	"	"	274	57	103	
Discount	118	1113.50	"	"	"	275	57	103	
Reg. of Dist.	219	31147.81	"	"	"	276	1147	194	
"	Abt. of Sales	1383	3014.40	"	"	277	503	243	
"	Surinder	259	96.55	"	"	278	611	183	
"	Manufacturing	760	727.19	"	Balance	478	366	22.9	
Accts Payable	766	57.00	"	"	"	479	115	35	
Reg. of Dist.	118	71307.06	"	"	"	480	115	35	
"	"	"	81101	"	"	"	"	"	
"	"	"	9443.61	"	"	"	"	"	
"	"	"	86.88	"	"	"	"	"	
"	Manufacturing	367	139.67	"	"	"	"	"	
Cash	175	360.00	"	"	"	"	"	"	
Discount	171	29.41	"	"	"	"	"	"	
Surinder	768	2713.57	"	"	"	"	"	"	
Manufacturing	270	3556	"	"	"	"	"	"	
"	"	"	2978.20	"	"	"	"	"	
"	"	"	55.21	"	"	"	"	"	
"	"	"	160.00	"	"	"	"	"	
"	"	"	33.11	"	"	"	"	"	
"	"	"	110.00	"	"	"	"	"	
"	"	"	476339.69	"	"	"	"	"	

676887.69

## General Expense

Mar 1	Balance	1918	493.95	Mar 31	Abstract of Sales	11	447.50
31	Reg. of Dist.	457	51153.70	"	Cash Discount	138	713.76
"	"	"	10294.11	"	Return for Wagon	202	123.88
"	Cash Discount	138	56.76	"	Reg. of Dist.	436	1424.11
"	Manufacturing	222	5835.75	"	"	"	"
"	Surinder	"	1666.19	"	"	"	"
"	Wm. H. H. Hardy at 253	"	49.99	"	"	"	"
Apr 30	Cash Discount	148	31.23	"	Abstract of Sales	11	1607.77
"	Reg. of Dist.	457	44759.25	"	Cash Discount	148	163.88
"	"	"	10366.67	"	Reg. of Dist.	457	1003.51
"	Surinder	277	1523.12	"	Cash	463	600.00
"	Cash	140	15443.83	"	"	465	4.123
30	Manufacturing	277	15443.83	"	"	"	"
May 31	Cash Discount	10	10.56	"	Abstract of Sales	24	723.27
"	Reg. of Dist.	440	33368.24	"	Cash Discount	10	1041.53
"	"	"	8945.18	"	Register of Dist.	440	6117.56
"	Surinder	283	16205.37	"	"	"	"
June 23	Cash	16	3720.00	"	"	"	"
30	Manufacturing	285	1010.08	"	Abstract of Sales	32	1892.61
"	Reg. of Dist.	447	55480.40	"	Cash Discount	32	50.78
"	"	"	753.124	"	Wm. H. H. Hardy at 257	"	11.11
"	Cash Discount	21	43.18	"	"	"	"
"	Surinder	285	1247.12	"	"	"	"
July 31	Cash Discount	21	51	"	Cash Discount	38	309.90
"	Manufacturing	281	5755.70	"	Wm. H. H. Hardy at 264	304	599.09
"	Reg. of Dist.	517	69454.07	"	Abstract of Sales	47	450.161
"	"	"	10449.94	"	Reg. of Dist.	517	702.91
"	"	"	10449.94	"	"	"	"
Aug 31	Manufacturing	316	4111.13	"	Cash Discount	35	100.77
"	Cash Discount	35	35	"	Wm. H. H. Hardy at 267	317	2145.73
"	Cash	"	110.11	"	Abstract of Sales	62	5763.47
"	Reg. of Dist.	537	33161.79	"	Reg. of Dist.	536	2443.65
"	"	"	44449.94	"	"	"	"
"	Taxes Accrued	313	61.44	"	"	"	"
"	"	"	111405.44	"	"	"	"
Sept 15	Cash	37	07	"	"	"	"
30	Manufacturing	314	102.38	"	Cash Discount	41	11.11
"	"	"	102.38	"	Abstract of Sales	71	11.11
"	"	"	102.38	"	"	"	"





## Manufacturing

July	31	Forwarded	127,142,12,850	July
Aug	31	Machinery Tools	17,190,76	Aug
		Accts Payable	46,113,781,75	
		Manufacturing	1,139,303,73	
Sept	30	Accts Payable	60,177,163,42	Oct
		Manufacturing	1,153,713,71	
Oct	31	Accts Payable	72,231,144,29	Nov
		Manufacturing	1,161,922,00	
Nov	30	Accts Payable	81,191,771,46	Dec
		Manufacturing	1,166,741,70	
Dec	31	Accts Payable	96,196,333,32	Jan
		Manufacturing	1,173,335,49	
Jan	30	Accts Payable	107,150,135,23	Feb
		Manufacturing	1,177,989,75	
Feb	28	Accts Payable	120,139,889,24	Mar
		Manufacturing	1,185,788,83	
			291,32,20	
			6,66,22	
			20,11,60,15	
		General Expense	1,12,169,48	
			1,168,849,5	
			200,449,24,67	
			3479,316,60	

1909	Mar	1	Balance	410,146,66,97	Mar
		31	Accts Payable	129,102,20,36	
			Manufacturing	1,139,34,12	Apr
				31,4,38,92,09	May
Apr	30	Accts Payable	140,97,60,72		June
		Manufacturing	1,163,28,28		July
May	31	Accts Payable	150,102,20,05		Aug
		Manufacturing	1,179,40,30		Sept
June	30	Accts Payable	160,88,90,26		
		Manufacturing	1,194,58,62		
July	31	Accts Payable	170,90,16,75		
		Manufacturing	1,16,288,25		
Aug	31	Accts Payable	181,70,54,43		
		Manufacturing	1,17,44,72		
Sept	30	Accts Payable	190,11,04,23		
		Manufacturing	1,199,36,70		
		Forwarded	31,19,24,20		
			203,19,44,81		

July	31	Forwarded	129,88,44,76	July
		Manufacturing	146,26,29,85	
Aug	30	Machinery Tools	19,111,71	Aug
		Manufacturing	60,65,16,57	
Sept	30	Machinery Tools	20,28,53	Sept
		General Expense	1,1,25,15	
		Manufacturing	72,11,74,81	
Oct	31	Manufacturing	55,61,74,37	Oct
			96,55,102,73	
Nov	30		107,112,24,20	Nov
			120,22,28,67	
Dec	21	Sundries	27,114,49,3	Dec
			28,1,1,6,23	
		Accts Payable	120,1,35,4,93	
		Manufacturing	1,1,58,30	
			4,67,6,22	
			20,1,16,6,15	
		Sales	20,1,99,04,41	
		Balance	4,21,46,4,77	
			3479,316,60	

31	Manufacturing	129,	1775043
	Sundries	31,	4188144
30	Manufacturing	140,	2136471
31		150,	2023714
30		160,	2850644
30		170,	2012241
31	Sundries	181,	2132061
30		190,	2517633
	Forwarded	131,	1838504

## Manufacturing

Sept	30	Forwarded	120,163,550,91	Sept
		Accts Payable	203,11,39,11,00	
Oct	30	Manufacturing	1,14,68,7,50	Oct
		Accts Payable	213,10,74,6,58	
Nov	30	Manufacturing	1,1,18,11,07	Nov
			221,28,74,2,48	
Dec	31	Accts Payable	235,57,1,15,09	Dec
		Manufacturing	236,2,65,2,65	
Jan	31	Accts Payable	237,1,18,1,8,83	Jan
			241,12,70,2,97	
Feb	28	Manufacturing	1,12,0,7,1,57	Feb
		General Expense	1,75,7,99	
		Manufacturing	1,77,8,46,0	
		General Expense	1,15,6,40,40	
		Manufacturing	1,1,19,3,5,5	
		General Expense	1,1,1,2,3,1	
		General Expense	1,1,2,3,1,78	
			303,1,31,1,13	

Mar	1	Balance	907,800,0,02	Mar
		Manufacturing	1,24,33,9,90	
		Accts Payable	261,1,30,0,9,18	
May	31	Accts Payable	274,78,2,9,21	May
		Manufacturing	1,1,5,2,9,3,1	
June	30	Accts Payable	288,54,70,6,17	June
		Manufacturing	1,1,2,0,8,4,1	
July	30	Accts Payable	298,67,6,5,7,04	July
		Manufacturing	1,11,0,9,0,99	
		Sale	64,1,1,2,5,8,4	
Aug	31	Real Estate Building	64,1,1,2,5,8,4	Aug
		Accts Payable	108,1,03,24,1,57	
		Manufacturing	1,1,2,5,2,1,52	
Sept	30	Accts Payable	218,1,1,1,2,0,5	Sept
		Manufacturing	1,1,1,3,9,4,3,1	
Oct	31	General Expense	64,1,5,3,2,5,3	Oct
		Accts Payable	230,1,1,0,7,6,77	
		Manufacturing	1,1,1,0,3,1,2,9	
Nov	30	Accts Payable	240,1,8,3,0,7,33	Nov
		Manufacturing	1,1,1,0,3,2,1,5	
Dec	31	Accts Payable	250,1,2,6,8,8,62	Dec
		Manufacturing	1,1,1,0,3,1,2,9	
Jan	31	Forwarded	120,1,1,1,1,1,1	Jan
			1,1,1,1,1,1,1	

Sept	30	Forwarded	130,193,43,70	Sept
		Sundries	202,2,10,11,74	
			213,2,10,11,74	
			221,2,10,11,74	
			46,2,10,11,74	
			236,2,10,11,74	
			249,2,10,11,74	
			57,2,10,11,74	
			137,2,10,11,74	
			10,2,10,11,74	

1910	Mar	31	Sundries	261,1,30,0,9,18	Mar
				274,78,2,9,21	
				288,54,70,6,17	
				298,67,6,5,7,04	
				318,1,1,2,0,8,4,1	
				330,1,1,2,0,8,4,1	
				340,1,1,2,0,8,4,1	
				350,1,1,2,0,8,4,1	
				360,1,1,2,0,8,4,1	
				370,1,1,2,0,8,4,1	
				380,1,1,2,0,8,4,1	
				390,1,1,2,0,8,4,1	
				400,1,1,2,0,8,4,1	
				410,1,1,2,0,8,4,1	
				420,1,1,2,0,8,4,1	
				430,1,1,2,0,8,4,1	
				440,1,1,2,0,8,4,1	
				450,1,1,2,0,8,4,1	
				460,1,1,2,0,8,4,1	
				470,1,1,2,0,8,4,1	
				480,1,1,2,0,8,4,1	
				490,1,1,2,0,8,4,1	
				500,1,1,2,0,8,4,1	
				510,1,1,2,0,8,4,1	
				520,1,1,2,0,8,4,1	
				530,1,1,2,0,8,4,1	
				540,1,1,2,0,8,4,1	
				550,1,1,2,0,8,4,1	
				560,1,1,2,0,8,4,1	
				570,1,1,2,0,8,4,1	
				580,1,1,2,0,8,4,1	
				590,1,1,2,0,8,4,1	
				600,1,1,2,0,8,4,1	
				610,1,1,2,0,8,4,1	
				620,1,1,2,0,8,4,1	
				630,1,1,2,0,8,4,1	
				640,1,1,2,0,8,4,1	
				650,1,1,2,0,8,4,1	
				660,1,1,2,0,8,4,1	
				670,1,1,2,0,8,4,1	
				680,1,1,2,0,8,4,1	
				690,1,1,2,0,8,4,1	
				700,1,1,2,0,8,4,1	
				710,1,1,2,0,8,4,1	
				720,1,1,2,0,8,4,1	
				730,1,1,2,0,8,4,1	
				740,1,1,2,0,8,4,1	
				750,1,1,2,0,8,4,1	
				760,1,1,2,0,8,4,1	
				770,1,1,2,0,8,4,1	
				780,1,1,2,0,8,4,1	
				790,1,1,2,0,8,4,1	
				800,1,1,2,0,8,4,1	
				810,1,1,2,0,8,4,1	
				820,1,1,2,0,8,4,1	
				830,1,1,2,0,8,4,1	
				840,1,1,2,0,8,4,1	
				850,1,1,2,0,8,4,1	
				860,1,1,2,0,8,4,1	
				870,1,1,2,0,8,4,1	
				880,1,1,2,0,8,4,1	
				890,1,1,2,0,8,4,1	
				900,1,1,2,0,8,4,1	
				910,1,1,2,0,8,4,1	
				920,1,1,2,0,8,4,1	
				930,1,1,2,0,8,4,1	
				940,1,1,2,0,8,4,1	
				950,1,1,2,0,8,4,1	
				960,1,1,2,0,8,4,1	
				970,1,1,2,0,8,4,1	
				980,1,1,2,0,8,4,1	
				990,1,1,2,0,8,4,1	
				1000,1,1,2,0,8,4,1	









## Manufacturing

Nov 30	Unwound	127 309 77	62 87	Reg 30	Unwound	127 534 44	145 14
	Reg. of Dist.	366 165 36	64	Dec 31	Abstract of Sales	1379 444 62	145 14
		70 551 67			Reg. of Dist.	385 124 77	145 14
	Manufacturing	557 13 97	63		Manufacturing	768 167 72	145 14
Dec 31	Reg. of Dist.	357 62 58	61		Subsidiary	768 167 72	145 14
		12 204 48		Jan 31	Reg. of Dist.	399 58 03	145 14
	Manufacturing	357 11 72	38		Gen. Expense	760 4 11	145 14
	General Expense	33 55			Acct. Payable	663 83 58	145 14
Jan	Reg. of Dist.	399 16 26	75		Manufacturing	1114 11 24	145 14
		342 12 30				264 11 24	145 14
	Abstract of Sales	1383 6 1	75	Feb 7	Reg. of Dist.	418 59 55	145 14
	Manufacturing	763 19 65	99			145 55	145 14
		246 18 62			Manufacturing	367 8 62	145 14
Feb 7	Reg. of Dist.	418 24 55	71		Subsidiary	119 24	145 14
		109 37			Manufacturing	769 1 72	145 14
		477 17 15			Abstract of Sales	1340 10 31	145 14
	Manufacturing	376 67			Reimb. & Interest	270 9 19	145 14
		86 63			General Expense	5 56	145 14
		286 03				27 732	145 14
	True Loss	272 179 72				8821	145 14
	General Expense	773 754 36			Mach. & Tools	77 77 37	145 14
	Manufacturing	773 54 38			True Loss	123 76	145 14
		472 653				9341	145 14
		202 438				572 534 71	145 14
	General Expense	202 23 76			Securities	22 22 69	145 14
		202 10 28			Profit Loss	273 102 58	145 14
		376 221 28			Manufacturing	773 54 38	145 14
		579 128 72				472 653	145 14
		110 26 80				773 54 38	145 14
	General Expense	114 71 44			Income Expense	33 57 46	145 14
		503 473				110 104 24	145 14
		277 61 11	88			102 62	145 14
		278 8460 22 10				221 74	145 14
	May 30	277 67 11	36			579 128 72	145 14
		10 14 11 36				110 26 80	145 14
		54 12 19 80				110 26 80	145 14

## Manufacturing

1915	Balance	550 22 197	1915	Reg. of Dist.	497 56 57	2 2
Jan 1	Reg. of Dist.	457 215 526 48	Mar 31	Abstract of Sales	4 48 38	
		46 251 31		General Expense	272 573 55	
	Manufacturing	272 478 16 74		Manufacturing	272 478 16 74	
	Reg. of Dist.	496 55 62 61			272 478 16 74	
	Manufacturing	272 4 11 24 48			11 24 48	
		4 11 24 48			11 24 48	
Apr 30	Reg. of Dist.	457 296 148 93	Apr 30	Abstract of Sales	11 154 80	
		534 98 68		Reg. of Dist.	458 63 61 43	
	Manufacturing	277 1124 89		Manufacturing	277 1124 89	
		1124 89			1124 89	
	Reg. of Dist.	277 1124 89		General Expense	277 1124 89	
	Manufacturing	277 1124 89		Manufacturing	277 1124 89	
		1124 89			1124 89	
May 31	Reg. of Dist.	457 1124 89	May 31	Abstract of Sales	24 46 96	
	Manufacturing	277 1124 89		Reg. of Dist.	458 1124 89	
	Reg. of Dist.	457 1124 89		Manufacturing	277 1124 89	
		1124 89			1124 89	
June 30	Reg. of Dist.	457 1124 89	June 30	Abstract of Sales	33 1124 89	
		1124 89		Reg. of Dist.	458 1124 89	
	Manufacturing	277 1124 89		Manufacturing	277 1124 89	
		1124 89			1124 89	
July 31	Reg. of Dist.	457 1124 89	July 31	Abstract of Sales	33 1124 89	
		1124 89		Reg. of Dist.	458 1124 89	
	Manufacturing	277 1124 89		Manufacturing	277 1124 89	
		1124 89			1124 89	
Aug 31	Reg. of Dist.	457 1124 89	Aug 31	Abstract of Sales	33 1124 89	
		1124 89		Reg. of Dist.	458 1124 89	
	Manufacturing	277 1124 89		Manufacturing	277 1124 89	
		1124 89			1124 89	
Sept 30	Reg. of Dist.	457 1124 89	Sept 30	Abstract of Sales	33 1124 89	
		1124 89		Reg. of Dist.	458 1124 89	
	Manufacturing	277 1124 89		Manufacturing	277 1124 89	
		1124 89			1124 89	
Oct 30	Reg. of Dist.	457 1124 89	Oct 30	Abstract of Sales	33 1124 89	
		1124 89		Reg. of Dist.	458 1124 89	
	Manufacturing	277 1124 89		Manufacturing	277 1124 89	
		1124 89			1124 89	
Nov 30	Reg. of Dist.	457 1124 89	Nov 30	Abstract of Sales	33 1124 89	
		1124 89		Reg. of Dist.	458 1124 89	
	Manufacturing	277 1124 89		Manufacturing	277 1124 89	
		1124 89			1124 89	
Dec 30	Reg. of Dist.	457 1124 89	Dec 30	Abstract of Sales	33 1124 89	
		1124 89		Reg. of Dist.	458 1124 89	
	Manufacturing	277 1124 89		Manufacturing	277 1124 89	
		1124 89			1124 89	

## Manufacturing

Oct.	1914	Forwarded	305.40	Oct.	1915
31	Manufacturing	338.	305.34	31	
			305.54		
			305.54		
		Page of Book	51.31	51.31	
			50.00		
			50.00		
		General Expense	76.71	76.71	
			76.71		
Nov.	31	Manufacturing	338.	338.12	31
			337.34	337.34	
		Page of Book	51.31	51.31	
			50.00		
		General Expense	76.71	76.71	
		Manufacturing	338.	338.12	
			337.34	337.34	
Dec.	31		338.	338.12	31
			337.34	337.34	
		Page of Book	51.31	51.31	
			50.00		
		General Expense	76.71	76.71	
			76.71		
		Manufacturing	338.	338.12	
			337.34	337.34	
		Page of Book	51.31	51.31	
			50.00		
		General Expense	76.71	76.71	
			76.71		
		Manufacturing	338.	338.12	
			337.34	337.34	
		Page of Book	51.31	51.31	
			50.00		
		General Expense	76.71	76.71	
			76.71		
		Manufacturing	338.	338.12	
			337.34	337.34	
		Page of Book	51.31	51.31	
			50.00		
		General Expense	76.71	76.71	
			76.71		
		Manufacturing	338.	338.12	
			337.34	337.34	
		Page of Book	51.31	51.31	
			50.00		
		General Expense	76.71	76.71	
			76.71		
		Manufacturing	338.	338.12	
			337.34	337.34	
		Page of Book	51.31	51.31	
			50.00		
		General Expense	76.71	76.71	
			76.71		
		Manufacturing	338.	338.12	
			337.34	337.34	
		Page of Book	51.31	51.31	
			50.00		
		General Expense	76.71	76.71	
			76.71		
		Manufacturing	338.	338.12	
			337.34	337.34	
		Page of Book	51.31	51.31	
			50.00		
		General Expense	76.71	76.71	
			76.71		
		Manufacturing	338.	338.12	
			337.34	337.34	
		Page of Book	51.31	51.31	
			50.00		
		General Expense	76.71	76.71	
			76.71		
		Manufacturing	338.	338.12	
			337.34	337.34	
		Page of Book	51.31	51.31	
			50.00		
		General Expense	76.71	76.71	
			76.71		
		Manufacturing	338.	338.12	
			337.34	337.34	
		Page of Book	51.31	51.31	
			50.00		
		General Expense	76.71	76.71	
			76.71		
		Manufacturing	338.	338.12	

Jan	31	Manufacturing	384.	16,117.81
				8125
		Pay of dish.	627.	5,485.42 70
				70,183.6
		General Expense	426.	67.44
		Manufacturing	257.	16,117.91
				8125
			217.	4.35
				3,201,752.88
Feb	29	Jan. 29th. Cash on	218.	16,614.95
		Manufacturing	270.	8,691.2
				22.99
		Reg. of Dist.	443.	2,900,027.80
				977,112.12
		General Expense	642.	9,252.98
		Manufacturing	177.	701.50
		Al. Jan. 29th. Cash on		2,044.13
				1,155,555.55

[illegible]

Jan.	31	Bk. of Dep't Current Accts	3500	7968.847
"	"	Manufacturing	"	16.517.91
"	"	"	"	81.155
"	"	Amts. of Sales	180	7968.35
"	"	Rentals: Curr. Acc.	350	12.917.115
"	"	Reg. f. Sch.	6.27	7968.35
"	"	Manufacturing	350	16.517.91
"	"	"	"	81.155
"	"	"	850	6.02
Feb.	28	Eas. Exp. Curr. Acc.	"	15.317.755
"	"	"	"	15.317.755
"	"	Amts. of Sales	180	12.916.01
"	"	Reg. f. Sch.	6.27	7968.35
"	"	Manufacturing	350	6.017.2
"	"	"	"	82.09
"	"	Cash Exp. Curr. Acc.	"	2.812.426
"	"	Reg. of Dist.	6.03	10.33.020.16
"	"	General Expense	371	1526.55

Manufacturing

[illegible]

12/10/2016





## Sales

1912		1913	
Feb 28	Forwarded	161	755116077
" 28	"	"	"
			255216077
1912		1913	
31	Acct Payable	755	5719777
30	"	761	100063
1913		1914	
Feb 28	Sales	761	100063
"	Thos. A. Edwin Inc	77	216041852
"	"	"	"
"	Capital Loss	27	82451
			251410049

1915		1916	
June 30	Sales	775	5719777
Sept 30	Manufacturing	381	48866392
1916		1917	
Feb 29	Sales	372	1549775
"	Manufacturing	381	48866392
"	Capital Loss	"	"
			446213127

255216077  
2132907  
16511317

2513241  
25321  
2529450156

1914		1915	
Feb 28	Forwarded	161	755116077
" 28	"	"	"
			255216077
1914		1915	
31	Acct Receivable	755	5719777
30	"	761	100063
1915		1916	
Feb 28	Sales	761	100063
"	Thos. A. Edwin Inc	77	216041852
"	"	"	"
"	Capital Loss	27	82451
			251410049

1917		1918	
June 30	Sales	775	5719777
Sept 30	Manufacturing	381	48866392
1918		1919	
Feb 29	Sales	372	1549775
"	Manufacturing	381	48866392
"	Capital Loss	"	"
			446213127



*Scrap Account**Van St. Rock. Cayalla*

cash

1897		1897		1897			
March	1	From General Budget	3	30.58.56	March 31	Cash	20.281.009.35
	31	Cash	20	20.54.68.18	April 30		29.268.477.82
April	30		24	2.85.77.27	May 31		28.240.775.26
May	31		38	3.37.15.71	July 31		27.735.84.62
June	30		47	3.08.48.27	August 31		28.80.55.02
July	31		50	3.49.20.43	Sept 30		64.278.128.10
Aug	31		64	2.34.45.19	Oct 31		73.241.744.21
Sept	30		73	2.27.8.11.24	Nov 30		87.278.459.92
Oct	31		87	4.02.25.27	Dec 31		91.126.720.26
Nov	30		91	2.46.62.11	1898		1.67.180.60
Dec	31		99	1.57.30.48	Jan 31		9.27.73.32.98
Jan	31		9	2.85.98.48	Feb 29		17.58.00.71.88
Feb	29		4	1.66.14.45	Balance		327.055.81
				327.055.81			

1908		1908		1908				
March	1	Balance	36	7.61.28	March 30	Cash	26	93.95.74
	30	Cash	36	9.98.5.09	April 30		33	97.50.53
Apr			39	1.98.13.97	May 30		40	128.22.61
May	30		40	1.00.33.63	June 30		47	128.58.22
June	30		47	1.57.22.85	July 31		55	128.131.45
July	31		55	1.31.18.41	Aug		62	128.00.29
Aug	31		62	1.1.46.70	Sept 30		71	161.22.06
Sept	30		71	1.50.57.03	Oct 31		80	243.41.68
Oct	31		80	2.50.75.56	Nov 30		88	335.33.43
Nov	30		88	3.35.06.61	Dec 31		97	447.155.22
Dec	31		97	4.20.66.71	Jan 30		106	243.630.41
Jan	30		106	2.50.32.04	Feb		116	157.742.35
Feb	29		116	1.58.05.52	"	Balance		137.743.97
			223.323.01					223.323.01

1897		1897		1897			
Mar	1	Balance	137	4.3.97	Mar 31	Cash	125.144.170.82
	31	Cash	137	1.52.33.33	Apr 30		134.154.15.96
Apr	30		137	3.26.29.75	May 31		141.117.181.97
May	31		141	1.17.18.14	June 30		149.139.287.81
June	30		149	1.25.72.42	July 31		157.146.58.52
July	31		157	1.27.50.67	Aug 31		164.130.378.17
Aug	31		164	1.47.32.74	Sept 30		175.142.490.18
Sept	30		175	1.27.13.53	Oct 30		181.162.103.13
Oct	30		181	1.47.72.49	Nov 30		193.131.412.83
Nov	30		193	1.27.67.29	Dec 31		9.21.97.73.28
Dec	31		9	2.38.79.83	Jan 31		2.25.48.25
Jan	31		18	2.08.35.48	Feb 28		27.18.43.34
Feb	28		27	1.84.11.67	Balance		72.330.16
				185.723.91			185.723.91

Cash

1890	1	Balance	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296
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991			991	
79	1	Balance	337.58 55	79
79	31	Cash	126.15	79
80	79		104.15	80
80	31		12.74	80
80	30		11.13	80
80	31		18.10	80
80	31		26.18	80
80	20		33.11	80
80	31		40.14	80
80	20		47.03	80
80	31		54.03	80
80	20		61.03	80
80	31		68.03	80
80	20		75.03	80
80	31		82.03	80
80	20		89.03	80
80	31		96.03	80
80	20		103.03	80
80	31		110.03	80
80	20		117.03	80
80	31		124.03	80
80	20		131.03	80
80	31		138.03	80
80	20		145.03	80
80	31		152.03	80
80	20		159.03	80
80	31		166.03	80
80	20		173.03	80
80	31		180.03	80
80	20		187.03	80
80	31		194.03	80
80	20		201.03	80
80	31		208.03	80
80	20		215.03	80
80	31		222.03	80
80	20		229.03	80
80	31		236.03	80
80	20		243.03	80
80	31		250.03	80
80	20		257.03	80
80	31		264.03	80
80	20		271.03	80
80	31		278.03	80
80	20		285.03	80
80	31		292.03	80
80	20		299.03	80
80	31		306.03	80
80	20		313.03	80
80	31		320.03	80
80	20		327.03	80
80	31		334.03	80
80	20		341.03	80
80	31		348.03	80
80	20		355.03	80
80	31		362.03	80
80	20		369.03	80
80	31		376.03	80
80	20		383.03	80
80	31		390.03	80
80	20		397.03	80
80	31		404.03	80
80	20		411.03	80
80	31		418.03	80
80	20		425.03	80
80	31		432.03	80
80	20		439.03	80
80	31		446.03	80
80	20		453.03	80
80	31		460.03	80
80	20		467.03	80
80	31		474.03	80
80	20		481.03	80
80	31		488.03	80
80	20		495.03	80
80	31		502.03	80
80	20		509.03	80
80	31		516.03	80
80	20		523.03	80
80	31		530.03	80
80	20		537.03	80
80	31		544.03	80
80	20		551.03	80
80	31		558.03	80
80	20		565.03	80
80	31</			

[illegible]

cash	37	1	2	1	1	33
"	42	1	4	8	9	71 44
"	54	1	1	1	0	55 98 +
"	63	1	5	6	7	78
"	71	1	2	7	5	46
"	79	1	1	4	1	28
"	87	2	3	0	6	7 01
"	95	1	3	7	6	76 30
"	103	1	4	6	9	7 95
"	111	1	5	8	0	5 75
"	119	1	6	0	8	4 17
"	127	1	9	1	0	5 31
name	32	7	8	8	88	
	14	10	3	1	50	

156	158	17	85
144	162	19	34
7	157	1	390
11	16	1	61
18	10	20	39
26	178	1	35
31	11	49	17
43	128	1	57
52	16	36	51
60	148	29	55
69	136	10	10
78	169	53	50
101	10	1	1
101	10	1	1

	86	134	99	18
"	96	153	99	23
"	105	153	114	31
"	114	153	157	41
"	123	155	185	50
"	137	171	195	60
"	141	175	160	63
"	151	179	171	65
"	171	181	189	191
"	21	195	165	59
"	31	215	185	76
"	41	210	191	70
"	191	233	211	81
	MOB 5444 071			

## Cash

[illegible]

1912					1912		
March	→	Balance		• 263.59	March	31	Cash
31		Cash	25.00	212.59	31	March	31
30		"	31.50	181.09	30	March	30
29		"	31.50	149.59	29	March	29
28		"	31.50	118.09	28	March	28
27		"	31.50	86.59	27	March	27
26		"	31.50	55.09	26	March	26
25		"	31.50	23.59	25	March	25
24		"	31.50	0.00	24	March	24
23		"	31.50	31.50	23	March	23
22		"	31.50	63.00	22	March	22
21		"	31.50	94.50	21	March	21
20		"	31.50	126.00	20	March	20
19		"	31.50	157.50	19	March	19
18		"	31.50	189.00	18	March	18
17		"	31.50	220.50	17	March	17
16		"	31.50	252.00	16	March	16
15		"	31.50	283.50	15	March	15
14		"	31.50	315.00	14	March	14
13		"	31.50	346.50	13	March	13
12		"	31.50	378.00	12	March	12
11		"	31.50	409.50	11	March	11
10		"	31.50	441.00	10	March	10
9		"	31.50	472.50	9	March	9
8		"	31.50	504.00	8	March	8
7		"	31.50	535.50	7	March	7
6		"	31.50	567.00	6	March	6
5		"	31.50	598.50	5	March	5
4		"	31.50	630.00	4	March	4
3		"	31.50	661.50	3	March	3
2		"	31.50	693.00	2	March	2
1		"	31.50	724.50	1	March	1
31		"	31.50	756.00	31	March	31
30		"	31.50	787.50	30	March	30
29		"	31.50	819.00	29	March	29
28		"	31.50	850.50	28	March	28
27		"	31.50	882.00	27	March	27
26		"	31.50	913.50	26	March	26
25		"	31.50	945.00	25	March	25
24		"	31.50	976.50	24	March	24
23		"	31.50	1008.00	23	March	23
22		"	31.50	1039.50	22	March	22
21		"	31.50	1071.00	21	March	21
20		"	31.50	1102.50	20	March	20
19		"	31.50	1134.00	19	March	19
18		"	31.50	1165.50	18	March	18
17		"	31.50	1197.00	17	March	17
16		"	31.50	1228.50	16	March	16
15		"	31.50	1260.00	15	March	15
14		"	31.50	1291.50	14	March	14
13		"	31.50	1323.00	13	March	13
12		"	31.50	1354.50	12	March	12
11		"	31.50	1386.00	11	March	11
10		"	31.50	1417.50	10	March	10
9		"	31.50	1449.00	9	March	9
8		"	31.50	1480.50	8	March	8
7		"	31.50	1512.00	7	March	7
6		"	31.50	1543.50	6	March	6
5		"	31.50	1575.00	5	March	5
4		"	31.50	1606.50	4	March	4
3		"	31.50	1638.00	3	March	3
2		"	31.50	1669.50	2	March	2
1		"	31.50	1701.00	1	March	1
31		"	31.50	1732.50	31	March	31
30		"	31.50	1764.00			

		2875 19229		1918		
1918	1	Baker	36,751.97	1918	Max	Bark
Mar	31	"	97.6	May	30	"
Apr	30	"	148.23	May	31	"
May	31	"	10.3	June	30	"
June	30	"	21.5	July	31	"
July	31	"	23.5	Aug	31	"
Aug	31	"	3.5	Sept	30	"
Sept	30	"	43.5	Oct	31	"
Oct	31	"	50.3	Nov	30	"
Nov	30	"	5	Dec	29	"
Dec	29	"	10.5			

## Bond Interest

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## Accrued Interest on Bonds

1916  
 Feb. 29 Profit & Loss 303 600.00

Am. of Geo. & Transit Co.  
 8.20.5

## Accrued Pay Roll

1914  
July 29 Prof. & Loss. 983 1378 19

Dec. 1915 75. Amount 8  
6.25

## Unpaid Bond Interest

1907			1907			1907			1907		
March	2	Cash	11.2	50.00	March	1	From General Ledger	3.1	275.00		
	5	"	4.4	25.00	Aug	2	Bond Interest	369.1	6,300.00		
	14	"	13.4	175.00	Oct	27	"	369.1	6,880.00		
	30	"	11.5	75.00							
Aug	7	"	5.7	175.00							
	"	"	4.4	175.00							
	"	"	4.4	250.00							
	"	"	4.4	250.00							
	5	"	4.4	365.00							
	6	"	4.4	1750.00							
	6	"	4.4	200.00							
	7	"	4.4	100.00							
	9	"	4.4	25.00							
	15	"	57.1	50.00							
	26	"	60.2	175.00							
Sep	13	"	65.1	25.00							
	20	"	67.1	175.00							
Oct	12	"	75.1	175.00							
Aug	3	"	10.0	25.00							
	"	"	4.4	25.00							
	"	"	4.4	50.00							
	6	"	4.4	50.00							
	7	"	4.4	50.00							
	8	"	4.4	75.00							
	12	"	4.4	100.00							
	20	"	4.4	1750.00							
	24	"	12.1	75.00							
	"	"	4.4	175.00							
		Balance		12,575.00							
				12,575.00							12,575.00
1911			1911			1911			1911		
Mar	9	Cash	19.1	75.00	Mar	1	Balance		150.00		
	18	"	4.4	250.00	Aug	25	Forwarded	210.0	6650.00		
	16	"	56.1	500.00							
Aug	4	"	56.1	25.00							
	6	"	4.4	125.00							
	7	"	4.4	25.00							
	10	"	4.4	50.00							
	11	"	4.4	100.00							
	14	"	4.4	315.00							
	20	"	57.1	175.00							
	24	"	4.4	50.00							
	25	"	4.4	175.00							
	"	Forwarded	210.0	650.00							
				7500.00							7500.00

## Unpaid Bond Interest

Aug 25	Forwarded	209	6650.00	Aug 25	Forwarded	209	8550.00
Sept 11	Cash	63	7500	Sept 18	Bond Interest	18	6950.00
Oct 7	"	72	5000	Oct 26	"	26	5700.00
" 9	"	"	7500				
" 2	"	107	15750.00				
" 4	"	"	12500				
" 5	"	"	5000				
" 8	"	"	12500				
" 15	"	109	25500.00				
" 17	"	"	5000.00				
" 20	"	114	3000.00				
" 27	"	"	7500				
"	Balance	"	1000.00				
			12550.00				12550.00
Aug 9	Cash	158	20000	Mar 1	Balance	"	10000
" 16	"	160	12500	Aug 7	Bond Interest	38	5700.00
" 20	"	164	5000	Oct 1	"	49	5400.00
" 27	"	168	2500				
Sept 1	"	167	35500.00				
" 17	"	169	25000				
Oct 15	"	175	15750.00				
" 20	"	"	5000				
" 23	"	172	7500				
Nov 2	"	185	2500				
" 9	"	"	7500				
Dec 1	"	19	30500.00				
" 4	"	"	12500				
" 7	"	"	5000				
" 10	"	"	10000				
" 14	"	21	15000				
" 16	"	22	25000				
" 28	Balance	"	10000				
			117000.00				117000.00
Mar 12	Cash	30	2500	Mar 1	Balance	"	17000.00
" 17	"	31	5000	Aug 1	Bond Interest	65	54000.00
" 31	"	55	7500	Oct 10	Forwarded	71	34750.00
June 1	"	62	15750.00				
" 1	"	"	2500				
Aug 5	"	72	15750.00				
" 8	"	"	10000				
" 10	"	"	5000				
"	Forwarded	71	71000.00				106750.00
			106750.00				

## Unpaid Bond Interest

Aug 10	Forwarded	710	34250.00	Aug 10	Forwarded	710	7100.00
Sept 7	Cash	72	12500	Oct 1	Bond Interest	76	5100.00
" 19	"	74	25000				
" 27	"	75	30500.00				
Sept 20	"	83	5000				
Oct 7	"	88	7500				
" 21	"	91	2500				
" 28	"	"	7500				
Nov 15	"	96	2500				
Dec 7	"	120	7500				
" 3	"	"	10750.00				
" 6	"	"	25000				
" 7	"	"	7500				
" 9	"	"	25000				
" 1	"	"	10000				
" 21	"	123	7500				
" 23	"	"	5000				
" 28	Balance	"	177000.00				177000.00
Mar 16	Cash	130	5000	Mar 1	Balance	"	5000
June 9	"	3	7129.38	Aug 7	Bond Interest	101	5100.00
" 27	San Expense	95	7500	Oct 7	"	117	4800.00
Aug 27	Cash	6	7500.00				
" 1	"	19	15750.00				
Feb 1	"	"	5750.00				
" 3	"	70	7500.00				
" 20	"	72	7500.00				
" 28	"	"	15750.00				
			48500.00				92500.00
Mar 15	Cash	109	7450.00	Mar 7	Bond Interest	140	4800.00
June 5	"	127	57500	Oct 3	"	159	4500.00
" 19	"	127	7500				
" 5	"	124	15750.00				
Feb 3	"	374	5750.00				
" 13	"	34	15750.00				
" 18	"	35	75000				
" 20	"	36	14500.00				
" 25	"	"	5000.00				
			93000.00				93000.00



## Unpaid Bond Interest

Aug 6	Cash	90	150.00	Aug 1	Bond Interest	1912	450.00
"	"	"	7150.00	Feb 2	"	2112	4700.00
"	"	"	7150.00				
Oct 14	"	108	1575.00				
Nov 3	"	1	1575.00				
Dec 5	"	"	1575.00				
"	"	"	2150.00				
10	"	"	2500.00				
			9700.00				9700.00
Aug 14	Cash	60	150.00	Aug 1	Bond Interest	1912	450.00
Sept 8	"	61	2150.00	Feb 2	"	2112	3900.00
Oct 27	"	70	1575.00				
	Balance	126	1575.00				
			2125.00				
Oct 3	Cash	139	2075.00	Mar 1	Balance		3100.00
Aug 9	"	"	2500.00	Aug 3	Bond Interest	2112	2225.00
Oct 13	"	29	2500.00	Feb 29	"	2112	3400.00
Oct 2	"	"	2150.00				
Nov 11	"	30	1575.00				
		25	1575.00				
		"	1775.00				
		"	2500.00				
			9150.00				9150.00

*Dividend Account*

1917

May 20	Accounts Payable	237.1	60.18.00	Stk 29	Profit and Loss	374	120.36.00
Aug 20		249.1	60.00.00				
			120.00.00				120.00.00

*See previous blains*

<sup>1905</sup>	<sup>1905</sup>
Feb 27. <i>See Log</i> No 16109948	May 27. <i>Balance</i> 16109948
<sup>1906</sup>	<sup>1906</sup>
Mar 1. <i>Balance</i> 16109948	Feb 27. <i>See Log</i> No 16109948

## Edison Phonograph Works 5% Good Bonds

1907	Aug 7	Cash	57	100.00	1907	March 1	From General Ledger	22500.00
	"	"	"	100.00				
	5	"	"	700.00				
	6	"	"	100.00				
		Balance		2500.00				2500.00
1908	Aug 14	Cash	56	1700.00	1908	March 1	Balance	2400.00
	27	Balance		22800.00				2400.00
				2400.00				2400.00
1909	Oct 22	Cash	179	12000.00	1909	March 1	Balance	22800.00
	28	Balance		21600.00				22800.00
				22800.00				22800.00
1910	Nov 30	Cash	99	17000.00	1910	March 1	Balance	21600.00
	Feb 78	Balance		7000.00				21600.00
				71600.00				21600.00
1911	June 13	Cash	5	11915.00	1911	March 1	Balance	7000.00
	"	Don Expense	95	8.50				
	Feb 79	Balance		7000.00				7000.00
				7000.00				7000.00
1912	Feb 21	Cash	36	17000.00	1912	March 1	Balance	17000.00
	78	Balance		18000.00				17000.00
				17000.00				17000.00
1913	Jan 31	Cash	146	9000.00	1913	March 1	Balance	18000.00
	"	"	"	9000.00				
	Feb 78	Balance		18000.00				18000.00
				18000.00				18000.00
1914	Feb 27	Balance		16000.00	1914	March 1	Balance	16000.00
1915	July 8	Cash	22	17000.00	1915	March 1	Balance	16000.00
	"	"	25	12000.00				
	Feb 11	Sub. Gen. Ledger	15	10000.00				16000.00
				16000.00				16000.00

## Furniture &amp; Fixtures

Nov. 1	Forwarded Exp.	3.2	87.50	Apr. 31	Balance	362.4	306.24
31	Accts Payable	448.2	449.96	Oct. 31	Accts Payable	371.4	104.12
	Manufacturing	"	"		Expenses		1.00
Apr. 30	Accts Payable	336.2	447.32				
	Manufacturing	"	"				
May 31	"	339.4	477.72				
	Accts Payable	"	"				
June 30	"	280.4	919.47				
	Manufacturing	"	"				
July 31	"	346.2	154.43				
	Accts Payable	"	"				
Aug. 31	"	271.1	176.58				
	Manufacturing	"	"				
Sept. 30	"	354.1	441.19				
	Accts Payable	"	"				
Oct. 31	"	275.4	192.64				
	Manufacturing	"	"				
Nov. 30	"	279.1	127.91				
	Accts Payable	"	"				
Dec. 31	"	316.1	247.24				
	Manufacturing	"	"				
1908	"	262.1	96.23				
Jan. 31	Accts Payable	266.1	67.14				
	Manufacturing	"	"				
Feb. 29	Accts Payable	371.1	135.51				
	Manufacturing	"	"				
	Accts Payable	374.1	124.43				
			105.169.86				
1908							105.169.86
Mar. 1	Balance	100.0	Apr. 30	General Expense	9.92		
31	Manufacturing	2.1	166.20	Sept. 30	Forwarded	240.2	694.07
	Accts Payable	"	163.63				
Apr. 30	"	1.1	524.54				
	Manufacturing	"	2.21.26				
May 30	Accts Payable	12.1	166.20				
	Manufacturing	"	2.66.59				
June 30	Accts Payable	29.1	115.67				
	Manufacturing	29.1	318.12				
July 31	Accts Payable	38.1	493.70				
	Manufacturing	"	118.28				
Aug. 31	Accts Payable	46.1	280.84				
	Manufacturing	"	472.84				
Sept. 30	Accts Payable	60.1	223.61				
	Manufacturing	"	314.01				
	Forwarded	240.1	84.92				
			704.299.99				704.299.99

105.169.86

704.299.99

## Furniture &amp; Fixtures

1904				1905			
Sept 30	Forwarded	249	6948.07	Sept 30	Forwarded	239	7149.72
Oct 31	Account Payable	72	443.18	1909			
	Manufacturing		159.90	Oct 27	Profit Loss	308	7659.10
Nov 30	Acct Payable	82	101.00		Balance		100
	Manufacturing		18.86				
Dec 31	Acct Payable	96	503.2				
	Manufacturing		10.39				
Jan 30	Acct Payable	107	32.50				
	Manufacturing		144				
Feb 28	Acct Payable	120	610				
	Manufacturing		167.5				
			755.02				755.02
1909							
Mar 1	Balance		100	1910			
Mar 30	Acct Payable	140	197.7	Apr 28	Profit & Loss	56	1774.42
May 31		150	39.15		Balance		100
June 30		160	18.00				
July 31		151	20.70				
Aug 31		225	8.00				
Sept 30		237	3.00				
Oct 28		249	72.00				
			754.22				754.22
1910							
Nov 1	Balance		140	Nov 30	Account Payable	320	42.75
31	Account Payable	261	169.95	Dec 31	Profit Loss	73	509.39
	Manufacturing		742	Jan 31	Forwarded	741	504.12
April 30	Acct Payable	2700	63.02				
	Manufacturing		14.28				
May 31	Account Payable	2791	24.66				
	Manufacturing		1769				
June 30	Account Payable	286	500				
July 31		308	750				
	Manufacturing		974				
Sept 30	Acct Payable	318	1704.7				
	Manufacturing		974				
Oct 31	Acct Payable	330	267.5				
	Manufacturing		59				
Nov 30		340	0.07				
Dec 31	Account Payable	353	221.6				
	Manufacturing		750				
Jan 31	Forwarded	741	504.12				
			1097.78				1097.78

## Furniture &amp; Fixtures

1911				1912			
Jan 31	Forwarded	240	549.14	Jan 31	Forwarded	240	548.14
	Account Payable	361	70.82	Feb 28	Profit Loss	88	609.51
	Manufacturing		6.5		Balance		100
Feb 28	Account Payable	374	58.73				
	Manufacturing		223				
			611.65				611.65
1911				1912			
March 1	Balance		100	May 31	Account Payable	407	33.53
Apr 27	Acct Payable	345	75.00	Sept 30	Profit & Loss	92	46.00
	Manufacturing		4.4	Oct 31		99	109.4
May 31		407	10.16	Nov 30	Profit Loss	112	164.74
June 30	Acct Payable	417	58.99	Feb 27	Balance	125	325.77
	Manufacturing		58.5				100
July 31	Acct Payable	427	76.42				
	Manufacturing		8.70				
Aug 31	Acct Payable	441	51.2				
	Manufacturing		240				
Sept 30	Acct Payable	453	100.43				
	Manufacturing		16.25				
Oct 31	Acct Payable	466	194.85				
	Manufacturing		152.6				
Nov 30	Acct Payable	476	332.17				
	Manufacturing		71.35				
Dec 30	Acct Payable	486	11.65				
	Manufacturing		20.18				
Jan 31	Acct Payable	498	636.89				
	Manufacturing		142.07				
Feb 27	Reg. & Dist		1.61				
	Acct Payable	511	721.25				
	Manufacturing		87.96				4362.69
			4762.69				
1912				1913			
March 1	Balance		100	May 31	Acct Payable	546	319.61
30	Acct Payable	522	86.59	Aug 31	Forwarded	741	305.77
	Manufacturing		159.13				
April 20	Acct Payable	532	304.65				
	Manufacturing		177.27				
May 31		541	38.14				
June 27	Acct Payable	558	208.10				
	Manufacturing		63.74				
July 31	Account Payable	17	461.60				
	Manufacturing		77.73				
Aug 31	Account Payable	23	78.25				
	Forwarded	741	305.77				
			3312.38				3312.38

## Furniture &amp; Fixtures

Aug 31	Forwarded	741	3,054.77	Aug 31	Forwarded	741	3,054.77
Sept 30	Manufacturing	72	1,464.77	Nov 30	Balance of Sales	114.75	5,740.00
Oct 31	Accts. Payable	36	1,730.25	Dec 31	Profit Loss	1567	38,115.11
Nov 30	Manufacturing	"	75.74	Jan 31	Balance of Sales	1162	7,783.35
Dec 31	Accts. Payable	50	3,604.48	Feb 28	Balance		5,801.77
Jan 31	Manufacturing	"	3,567				
Feb 28	Accts. Payable	61	1,449.05				
Mar 31	Manufacturing	"	1,549				
Apr 30	Accts. Payable	76	2,415.77				
May 31	Manufacturing	"	1,337.3				
Jun 30	Accts. Payable	89	3,619.20				
Jul 31	Manufacturing	"	1,372.29				
Aug 31	Reg. of Dist.	"	1,46				
Sept 30	Accts. Payable	101	2,106.70				
Oct 31	Manufacturing	"	1,654.7				
Nov 30	Accts. Payable	"	1,700.00				
Dec 31	Manufacturing	162	1,181.16				
Jan 31	Profit Loss	171	2,167.79				
			7,821.24				7,821.24
1913							
Jan 31	Accts. Payable	115	3,601.50	1913	Accts. of Sales	1071	5,897.1
Feb 28	Manufacturing	"	426.4	Dec 31	Profit Loss	206	3,440.81
Mar 31	Accts. Payable	130	3,701.14	Jan 31	Balance	225	1,147.88
Apr 30	Manufacturing	"	1,131				2,607.88
May 31	Accts. Payable	138	2,819.07				
Jun 30	Manufacturing	"	1,019.7				
Jul 31	Accts. Payable	144	1,110.1				
Aug 31	Manufacturing	148	1,085.90				
Sept 30	Accts. Payable	150	2,264				
Oct 31	Manufacturing	150	1,110.00				
Nov 30	Accts. Payable	152	1,16				
Dec 31	Manufacturing	152	1,08.00				
Jan 31	Accts. Payable	154	1,110				
Feb 28	Manufacturing	154	579.89				
Mar 31	Accts. Payable	156	2,371.50				
Apr 30	Manufacturing	157	2,351.78				
May 31	Accts. Payable	157	1,110.7				
Jun 30	Manufacturing	157	1,099.60				
Jul 31	Accts. Payable	158	1,095.5				
Aug 31	Manufacturing	158	1,095.5				
1914							
Jan 31	Balance	160	4,607.89				
Feb 28	Reg. of Dist.	160	376				

## Furniture &amp; Fixtures

Apr 30	Forwarded	272	1,611.13	Jan 30	Reg. of Dist.	29	350
May 31	Reg. of Dist.	262	1,199.92	Feb 27	Accts. Payable	160	3,897.19
Jun 30	"	278	1,744.67		Balance		13,206.66
Jul 31	"	276	1,611.51				
Aug 31	"	311	1,733.91				
Sept 30	"	275	1,531.13				
Oct 31	"	241	1,110.7				
Nov 31	"	254	1,110.7				
Dec 31	"	382	2,911.24				
1915	Manufacturing	287	1,550.57				
Jan 31	Reg. of Dist.	418	1,110.7				
Feb 27	Manufacturing	270	1,110.7				
			17,661.26				17,661.26
1915				1915			
Mar 1	Balance		13,206.66	July 31	Reg. of Dist.	517	5,135
Apr 30	Reg. of Dist.	437	1,449.19	Aug 31	Accts. Payable	161	5,544
May 31	"	470	1,655.56	Sept 30	Reg. of Dist.	517	5,135
Jun 30	"	479	1,655.56	Oct 31	Accts. Payable	161	5,544
Jul 31	"	479	1,655.56	Nov 30	Reg. of Dist.	517	5,135
Aug 31	"	587	1,655.56	Dec 31	Accts. Payable	161	5,544
Sept 30	"	587	1,655.56	Jan 31	Reg. of Dist.	517	5,135
Oct 31	"	574	1,655.56	Feb 27	Accts. Payable	161	5,544
Nov 30	"	594	1,655.56	Mar 1	Balance		13,206.66
Dec 31	"	610	1,655.56				
Jan 31	"	637	1,655.56				
Feb 27	"	637	1,655.56				
			2,622.81				2,622.81

## Machinery &amp; Tools

1909			1910				
Nov 1	From Cash Ledger	3 25 07	3 10 53	April 20	Accts Payable	338 1	5 44 60
31	Accts Payable	338 1	9 18 91	May 31		338 1	5 18 96
	Manufacturing	1 1	8 8 53	July 31	Summe Expense	347 1	5 47
April 30		336 1	5 3 73			347 1	5 11 03
May 31		339 1	1 10 19	Oct 31	Profit & Loss Balance	376 1	5 26 84
		1 10 19	5 3 73			376 1	5 26 84
June 30	Accts Payable	343 1	6 36 07				
	Manufacturing	1 1	5 11 21				
July 31	Manufacturing	344 1	1 19 18				
	Accts Payable	1 1	5 2 28				
Aug 31		347 1	6 02 68				
	Manufacturing	1 1	2 1 27				
Sept 30		348 1	2 58 80				
	Accts Payable	1 1	7 18 53				
Oct 31		349 1	7 04 04				
	Manufacturing	348 1	6 40 86				
Nov 30		349 1	1 58 05				
	Accts Payable	340 1	16 06 13				
Dec 30		341 1	3 144 89				
	Manufacturing	343 1	1 18 40				
Jan 31	Accts Payable	346 1	14 33 15				
	Manufacturing	1 1	3 00 08				
Feb 29	Accounts Payable	371 1	24 64 26				
	Manufacturing	371 1	9 26				
	Accounts Payable	372 1	4 50 00				
		372 1	6 30 53 1/2				
1911							
Mar 1	Balance	400 00	00 00	Aug 31	Manufacturing	17 1	95 76
31	Manufacturing	2 1	76 19	Sept 30	Forwarded	25 1	42 87 66
	Accts Payable	1 1	2 33 10				
Apr 30		7 1	572 10				
	Manufacturing	8 1	1 18 55				
May 30	Accts Payable	12 1	3 11 79				
	Manufacturing	1 1	5 11 03				
June 30	Accts Payable	29 1	6 58 26				
	Manufacturing	29 1	8 36 52				
July 31	Accts Payable	38 1	2 84 17				
	Manufacturing	1 1	144 3 20				
Aug	Accts Payable	46 1	5 27 26				
	Manufacturing	1 1	1 11 71				
Sept 30		19 1	11 11 71				
	Accts Payable	60 1	21 00 24				
	Manufacturing	1 1	169 54				
	Forwarded	250 1	95 76				
		428 1	7 4 27				



## Machinery &amp; Tools

1908	Sept 30	Forwarded	2494	2576
Oct 31	Manufacturing	200	284.53	1909
	Account Payable	72.11	2730.99	Feb 27
	Manufacturing	72.11	2730.99	Profit Loss
		84.11	2815.10	Balance
Nov 30	Accts Payable	84.11	2815.10	
	Manufacturing	84.11	2815.10	
Dec 31	Accts Payable	96.11	2896.13	
	Manufacturing	96.11	2896.13	
Jan 30	Accts Payable	107.11	2984.30	
	Manufacturing	107.11	2984.30	
Feb 27	Accts Payable	120.11	3074.25	
	Manufacturing	120.11	3074.25	
		27.11	3101.36	
		25.11	3126.47	
		4490.11.11		
				4490.11.11

1909	Mar	1	Balance	4040.37.82	Sept 30	Accts Payable	1908	6432.21	
		31	Accts Payable	129.11	623.83	31	Profit Loss	45.11	4135.89.35
			Manufacturing	129.11	623.83	28	Forwarded	449	4135.89.35
				31.11	256.19			251.11	4386.99.11
Apr	30	Accts Payable	140.11	1011.32					
		Manufacturing		184.49					
May	31	Accts Payable	150.11	449.67					
		Manufacturing		711.95					
June	30	Accts Payable	160.11	369.15					
		Manufacturing		113.90					
July	31	Accts Payable	174.11	140.66					
		Manufacturing		326.9					
Aug	31	Accts Payable	184.11	550.19					
		Manufacturing		21.58					
Sept	30		190.11	11.33					
Oct	30	Accts Payable	202.11	505.46					
		Manufacturing		30.86					
Nov	30	Accts Payable	213.11	678.21					
		Manufacturing		88.53					
Dec	31		224.11	108.60					
		Accts Payable	236.11	311.24					
Jan	31	Manufacturing	336.11	17.31					
		Accts Payable	237.11	131.25					
Feb	28		247.11	31.38.15					
		Forwarded	251.11	120.37.23					
				4698.44.34					

## Machinery &amp; Tools

1910	Feb 28	Forwarded	250	4190.23					
		Manufacturing	250	4190.23					
		Profit Loss	52.11	4242.34					
			417.10432						
1910	Mar 1	Balance	375201.09	Nov 30	Accounts Payable	340	4293.27		
	31	Accounts Payable	261	678.66	31	Profit Loss	73	375201.09	
		Manufacturing	261	678.66		31	Accounts Payable	361	4366.38
April 30	Accts Payable	270	3750.07	Dec 28	Profit Loss	88	4454.49		
	Manufacturing	270	3750.07		Balance	375201.09			
May 31	Accounts Payable	279	506.76						
	Manufacturing	279	506.76						
June 30	Accounts Payable	288	977.4						
	Manufacturing	288	977.4						
July 30	Accounts Payable	298	178.21						
	Manufacturing	298	178.21						
Aug 31	Accounts Payable	308	11.19						
	Manufacturing	308	11.19						
Sept 30	Accts Payable	318	203.86						
	Manufacturing	318	203.86						
Oct 31	Accts Payable	330	269.71						
	Manufacturing	330	269.71						
Nov 30	Accts Payable	340	514						
	Manufacturing	340	514						
Dec 31	Accounts Payable	352	11.19						
	Manufacturing	352	11.19						
Jan 28	Accts Payable	361	109						
	Manufacturing	361	109						
Feb 28	Accts Payable	371	329.42						
	Manufacturing	371	329.42						
		3859	20.02						
							3859.20.02		
1911	Mar 1	Balance	34347.51	June 30	Accts Payable	474	151.767		
	31	Accts Payable	392	406.49	July 31	Forwarded	76	34347.51	
	Manufacturing	392	406.49						
Apr 28	Accts Payable	395	108.87						
	Manufacturing	395	108.87						
May 31	Accounts Payable	407	211.26						
	Manufacturing	407	211.26						
June 30	Accts Payable	417	15.01						
	Manufacturing	417	15.01						
July 31	Accts Payable	427	13.00						
	Manufacturing	427	13.00						
Aug 21	Forwarded	437	151.767						
		3455	14.07						
							3455.14.07		

## Machinery &amp; Tools

Aug 31	Forwarded	751.31	31.12.35	Aug 31	Forwarded	751.31	31.12.35
	Acct Payable	41.14	379.17	Oct 30	Profit Loss	113.28	78.35.55
	Manufacturing	"	1.09	Oct 29	Acct Payable	511.15	78.35.55
Sept 30	Acct Payable	45.50	44.18		Profit Loss	175.15	78.35.55
Oct 31	"	46.61	65.38		Balance	31.12.35	78.35.55
Nov 30	"	47.61	34.13.9				
Dec 30	"	48.61	6.51.7				
	Manufacturing	"	7.18				
	Reg of Dist	"	1.09.9.5				
Jan 31	Acct Payable	49.61	10.10.5				
	Manufacturing	"	1.09.9.5				
Feb 29	"	51.11	3.22.5				
			3.48.7.68.35				3.48.7.68.35
Mar 31	Forwarded	511.11	31.12.35	Mar 31	Profit Loss	155.35	350.7.11.06
	Acct Payable	511.11	41.14	Apr 30	Acct Sales	116.52	1.15.78
	Manufacturing	"	4.55	Apr 28	Sales	159.4	3.48.7.68.35
April 30	Acct Payable	533.31	31.0.14		Profit Loss	171.15	8.56.88
	Manufacturing	"	1.73.8		Forwarded	533.35	4.43.36
May 31	Acct Payable	546.61	47.44.66				
	Manufacturing	"	3.47.73				
	Undivided Tool	"	1.09.9.5				
June 29	Reg of Dist	555.55	7.47.11.47				
	Undivided Tool	"	61.78				
July 31	Account Payable	72.11	43.7.6.72				
	Manufacturing	"	6.53				
Aug 31	Account Payable	73.11	44.51.15				
	Manufacturing	"	70.15.5				
	Undivided Tool	"	70.15.5				
Sept 30	Account Payable	36.11	76.7.69				
	Manufacturing	"	78.11				
Oct 31	Account Payable	50.11	19.15				
	Manufacturing	"	50.37				
	Undivided Tool	"	7.26				
Nov 30	Account Payable	61.11	58.9.66				
	Manufacturing	"	7.84				
Dec 31	Account Payable	76.11	37.4.40				
	Manufacturing	"	119.29				
Jan 31	Acct Payable	89.11	155.4.12				
	Manufacturing	"	146.41				
Feb 28	Account Payable	101.11	68.6.05				
	Manufacturing	"	5.11.8.9.9				
	Forwarded	752.51	31.12.35				
			32.95.1.63.1				32.95.1.63.1

## Machinery &amp; Tools

Feb 28	Forwarded	157.35	43.3.6.4	Feb 28	Forwarded	157.35	43.3.6.4
	Manufacturing	166.11	1.1.1.75		Balance	273.3.1.17.3	
			359.4.3.13.9				359.4.3.13.9
Mar 31	Balance	373.3.49.77	14.13	June 30	Acct of Sales	124.11	200.5.0.0
	Acct Payable	115.11	19.5.4.1	Sept 30	"	73.61	29.5.6.6
	Manufacturing	"	1.1.1.75	Oct 31	Profit Loss	708.3	3.03.18.15.5
Apr 30	Acct Payable	170.11	1.6.1.0.7	Feb 28	"	273.3	5.0.3.2.5
	Manufacturing	"	1.1.1.75		Balance	273.3	5.0.3.2.5
May 31	Acct Payable	138.11	51.5.5.6.4				273.3
	Manufacturing	"	5.0.3.2.5				273.3
June 30	Account Payable	146.11	1.1.1.75				
	Manufacturing	"	1.1.1.75				
July 31	Account Payable	166.11	1.1.1.75				
	Manufacturing	"	1.1.1.75				
Aug 30	Acct Payable	166.11	1.1.1.75				
	Manufacturing	"	1.1.1.75				
Sept 30	Acct Payable	174.11	9.4.7.15				
	Manufacturing	"	1.1.1.75				
Oct 31	Acct Payable	186.11	2.4.4.6.0				
	Manufacturing	"	1.1.1.75				
Nov 29	Acct Payable	197.11	3.5.5.2.6				
	Manufacturing	"	1.1.1.75				
Dec 31	Acct Payable	207.11	5.0.1.0.5				
	Manufacturing	"	1.1.1.75				
Jan 31	Acct Payable	221.11	1.1.3.2.6				
	Manufacturing	"	1.1.1.75				
Feb 28	Acct Payable	231.11	7.5.3.0.0				
	Manufacturing	"	1.1.1.75				
			368.1.7.50.0				368.1.7.50.0
Mar 31	Balance	373.3.49.77	14.13	June 30	Reg of Dist	274.11	37.27
	Reg of Dist	274.11	1.78.0.59	Sept 30	"	341.11	1.5.5.5
			67.11		Forwarded	274.11	1.5.5.5
Apr 30	"	267.3	6.59.5.73				
	"	"	1.1.1.75				
May 29	"	278.3	2.5.1.0.4				
	"	"	1.1.1.75				
June 30	"	289.3	4.1.1.4.8				
	"	"	1.1.1.75				
July 31	"	311.3	1.1.1.75				
Aug 31	"	325.3	3.1.1.75				
	"	"	1.1.1.75				
	Forward	326.3	1.1.1.75				
			264.1.7.50.0				264.1.7.50.0

## Machinery &amp; Tools

1914	Sept 20	Forwarded	103 35 1 53	110	Sept 20	Forwarded	103 35 1 53
	Oct 31	Reg. of Dist.	341	110	Oct 31	Reg. of Dist.	341
	"	"	352	110	"	"	352
	"	"	366	110	"	"	366
	"	"	381	110	"	"	381
	"	"	397	110	"	"	397
	"	"	415	110	"	"	415
	"	"	431	110	"	"	431
	"	"	447	110	"	"	447
	"	"	463	110	"	"	463
	"	"	479	110	"	"	479
	"	"	495	110	"	"	495
	"	"	511	110	"	"	511
	"	"	527	110	"	"	527
	"	"	543	110	"	"	543
	"	"	559	110	"	"	559
	"	"	575	110	"	"	575
	"	"	591	110	"	"	591
	"	"	607	110	"	"	607
	"	"	623	110	"	"	623
	"	"	639	110	"	"	639
	"	"	655	110	"	"	655
	"	"	671	110	"	"	671
	"	"	687	110	"	"	687
	"	"	703	110	"	"	703
	"	"	719	110	"	"	719
	"	"	735	110	"	"	735
	"	"	751	110	"	"	751
	"	"	767	110	"	"	767
	"	"	783	110	"	"	783
	"	"	799	110	"	"	799
	"	"	815	110	"	"	815
	"	"	831	110	"	"	831
	"	"	847	110	"	"	847
	"	"	863	110	"	"	863
	"	"	879	110	"	"	879
	"	"	895	110	"	"	895
	"	"	911	110	"	"	911
	"	"	927	110	"	"	927
	"	"	943	110	"	"	943
	"	"	959	110	"	"	959
	"	"	975	110	"	"	975
	"	"	991	110	"	"	991
	"	"	1007	110	"	"	1007
	"	"	1023	110	"	"	1023
	"	"	1039	110	"	"	1039
	"	"	1055	110	"	"	1055
	"	"	1071	110	"	"	1071
	"	"	1087	110	"	"	1087
	"	"	1103	110	"	"	1103
	"	"	1119	110	"	"	1119
	"	"	1135	110	"	"	1135
	"	"	1151	110	"	"	1151
	"	"	1167	110	"	"	1167
	"	"	1183	110	"	"	1183
	"	"	1199	110	"	"	1199
	"	"	1215	110	"	"	1215
	"	"	1231	110	"	"	1231
	"	"	1247	110	"	"	1247
	"	"	1263	110	"	"	1263
	"	"	1279	110	"	"	1279
	"	"	1295	110	"	"	1295
	"	"	1311	110	"	"	1311
	"	"	1327	110	"	"	1327
	"	"	1343	110	"	"	1343
	"	"	1359	110	"	"	1359
	"	"	1375	110	"	"	1375
	"	"	1391	110	"	"	1391
	"	"	1407	110	"	"	1407
	"	"	1423	110	"	"	1423
	"	"	1439	110	"	"	1439
	"	"	1455	110	"	"	1455
	"	"	1471	110	"	"	1471
	"	"	1487	110	"	"	1487
	"	"	1503	110	"	"	1503
	"	"	1519	110	"	"	1519
	"	"	1535	110	"	"	1535
	"	"	1551	110	"	"	1551
	"	"	1567	110	"	"	1567
	"	"	1583	110	"	"	1583
	"	"	1599	110	"	"	1599
	"	"	1615	110	"	"	1615
	"	"	1631	110	"	"	1631
	"	"	1647	110	"	"	1647
	"	"	1663	110	"	"	1663
	"	"	1679	110	"	"	1679
	"	"	1695	110	"	"	1695
	"	"	1711	110	"	"	1711
	"	"	1727	110	"	"	1727
	"	"	1743	110	"	"	1743
	"	"	1759	110	"	"	1759
	"	"	1775	110	"	"	1775
	"	"	1791	110	"	"	1791
	"	"	1807	110	"	"	1807
	"	"	1823	110	"	"	1823
	"	"	1839	110	"	"	1839
	"	"	1855	110	"	"	1855
	"	"	1871	110	"	"	1871
	"	"	1887	110	"	"	1887
	"	"	1903	110	"	"	1903
	"	"	1919	110	"	"	1919
	"	"	1935	110	"	"	1935
	"	"	1951	110	"	"	1951
	"	"	1967	110	"	"	1967
	"	"	1983	110	"	"	1983
	"	"	1999	110	"	"	1999
	"	"	2015	110	"	"	2015
	"	"	2031	110	"	"	2031
	"	"	2047	110	"	"	2047
	"	"	2063	110	"	"	2063
	"	"	2079	110	"	"	2079
	"	"	2095	110	"	"	2095
	"	"	2111	110	"	"	2111
	"	"	2127	110	"	"	2127
	"	"	2143	110	"	"	2143
	"	"	2159	110	"	"	2159
	"	"	2175	110	"	"	2175
	"	"	2191	110	"	"	2191
	"	"	2207	110	"	"	2207
	"	"	2223	110	"	"	2223
	"	"	2239	110	"	"	2239
	"	"	2255	110	"	"	2255
	"	"	2271	110	"	"	2271
	"	"	2287	110	"	"	2287
	"	"	2303	110	"	"	2303
	"	"	2319	110	"	"	2319
	"	"	2335	110	"	"	2335
	"	"	2351	110	"	"	2351
	"	"	2367	110	"	"	2367
	"	"	2383	110	"	"	2383
	"	"	2399	110	"	"	2399
	"	"	2415	110	"	"	2415
	"	"	2431	110	"	"	2431
	"	"	2447	110	"	"	2447
	"	"	2463	110	"	"	2463
	"	"	2479	110	"	"	2479
	"	"	2495	110	"	"	2495
	"	"	2511	110	"	"	2511
	"	"	2527	110	"	"	2527
	"	"	2543	110	"	"	2543
	"	"	2559	110	"	"	2559
	"	"	2575	110	"	"	2575
	"	"	2591	110	"	"	2591
	"	"	2607	110	"	"	2607
	"	"	2623	110	"	"	2623
	"	"	2639	110	"	"	2639
	"	"	2655	110	"	"	2655
	"	"	2671	110	"	"	2671
	"	"	2687	110	"	"	2687
	"	"	2703	110	"	"	2703
	"	"	2719	110	"	"	2719
	"	"	2735	110	"	"	2735
	"	"	2751	110	"	"	2751
	"	"	2767	110	"	"	2767
	"	"	2783	110	"	"	2783
	"	"	2799	110	"	"	2799
	"	"	2815	110	"	"	2815
	"	"	2831	110	"	"	2831
	"	"	2847	110	"	"	2847
	"	"	2863	110	"	"	2863
	"	"	2879	110	"	"	2879
	"	"	2895	110	"	"	2895
	"	"	2911	110	"	"	2911
	"	"	2927	110	"	"	2927
	"	"	2943	110	"	"	2943
	"	"	2959	110	"	"	2959
	"	"	2975	110	"	"	2975
	"	"	2991	110	"	"	2991
	"	"	3007	110	"	"	3007
	"	"	3023	110	"	"	3023
	"	"	3039	110	"	"	3039
	"	"	3055	110	"	"	3055
	"	"	3071	110	"	"	3071
	"	"	3087	110	"	"	3087
	"	"	3103	110	"	"	3103
	"	"	3119	110	"	"	3119
	"	"	3135	110	"	"	3135
	"	"	3151	110	"	"	3151
	"	"	3167	110	"	"	3167
	"	"	3183	110	"	"	3183
	"	"	3199	110	"	"	3199
	"	"	3215	110	"	"	3215
	"	"	3231	110	"	"	3231
	"	"	3247	110	"	"	3247
	"	"	3263	110	"	"	3263
	"	"	3279	110	"	"	3279
	"	"	3295	110	"	"	3295
	"	"	3311	110	"	"	3311
	"	"	3327	110	"	"	3327
	"	"	3343	110	"	"	3343
	"	"	3359	110	"	"	3359
	"	"	3375	110	"	"	3375
	"	"	3391	110	"	"	3391
	"	"	3407	110	"	"	3407
	"	"	3423	110	"	"	3423
	"	"	3439	110	"	"	3439
	"	"	3455	110	"	"	3455
	"	"	3471	110	"	"	3471
	"	"	3487	110	"	"	3487
	"	"	3503	110	"	"	3503
	"	"	3519	110	"	"	3519
	"	"	3535	110	"	"	3535
	"	"	3551	110	"	"	3551
	"	"	3567	110	"	"	3567
	"	"	3583	110	"	"	3583
	"	"	3599	110	"	"	3599
	"	"	3615	110	"	"	3615
	"	"	3631	110	"	"	3631
	"	"	3647	110	"	"	3647
	"	"	3663	110	"	"	3663
	"	"	3679	110	"	"	3679
	"	"	3695	110	"	"	3695
	"	"	3711	110	"	"	3711
	"	"	3727	110	"	"	3727
	"	"	3743	110	"	"	3743
	"	"	3759	110	"	"	3759
	"	"	3775	110	"	"	3775
	"	"	3791	110	"	"	3791
	"	"	3807	110	"	"	3807
	"	"	3823	110	"	"	3823

## National Phonograph Co. Interest a/c.

1907							
May	31	Acct. Payable	299.1	2784.68	Stk 27 Profit and Loss	374.1	3740.1637
July	31		346.1	5344.00			
Sept	30		374.1	6043.64			
Oct	31		377.1	6040.46			
Nov	30		360.1	5751.56			
Dec	31		362.1	5358.28			
Jan	31		366.1	5172.13			
Feb	27		371.1	5319.20			
			372.1	5027.35			
			373.1	4644.37			
							3740.1637
1908							
May	30	Acct. Payable	12.1	4658.65	Stk 27 Profit & Loss	29.1	37554.75
July	30		29.1	2681.09			
July	31		38.1	2588.45			
Aug			46.1	3071.69			
Sept	30		60.1	3322.62			
Oct	31		72.1	3298.36			
Nov	30		84.1	2873.19			
Jan	30		107.1	2937.63			
Feb				2987.67			
				37554.75			
							37554.75
1909							
May	30	Acct. Payable	1601	9658.82	Stk 28 Profit & Loss	51	35216.92
Sept			19102	8781.02			
Oct			202.1	2744.55			
Nov	31		225	7049.36			
Jan			237	7131.07			
Feb	28		249	1002.12			
				35216.92			
							35216.92
1910							
May	31	Account Payable	2611	1097.39	Stk 28 Profit & Loss	78	15355.54
April	30		2702	4024.16			
May	31		2784	11942.71			
July	30		298.1	21144.66			
Aug	31		308.1	17712.5			
Sept	30		318.1	16516.46			
Oct	31		330.1	1456.01			
Nov	30		340.1	12147.3			
Dec	31		353	9715.9			
Jan	31		361	10071.1			
Feb	28		374	12527.8			
				15355.54			
							15355.54

## Edison Storage Battery Co, Interest Account.

Oct 31	Accts Payable	10/1	10180.97	Nov 31	Edison Stor Batts Co	10/1	10702.70
10/1		10/1	217.73				
			10702.70				10702.70



## Real Estate &amp; Buildings

Aug 31	Forwarded	424	11	474	Aug 31	Forwarded	424	11	474
Sept 30	Accts Payable	60	11	372	Jan 30	Accts Payable	107	11	602
Oct 31	"	72	11	187	Feb 27	"	122	11	686
	Manufacturing			137		Balance			275
Nov 30	Accts Payable	84	11	172					30
Dec 31	"	94	11	300					
Feb 27	"	120	11	420					
				424					424

Mar 1	Balance	424	11	26	Mar 31	Accts Payable	129	11	900
				424	Apr 30	"	164	11	900
				424		Balance			424
				424					424

May 1	Balance	424	11	26	July 30	Accts Payable	248	11	383
June 30	Accts Payable	288	11	467	Aug 31	Manufacturing	65	11	347
July 19	Manufacturing	65	11	324	Feb 28	Balance			424
July 30	"	298	11	327					
Aug 31	"	65	11	347					
Sept 30	Accts Payable	361	11	172					
Oct 28	"	371	11	200					
				424					424

Nov 1	Balance	424	11	26	Oct 31	Forwarded	424	11	46
Dec 31	Accts Payable	388	11	495					
Jan 31	Manufacturing	41	11	53					
Apr 30	Accts Payable	295	11	156					
May 31	Accts Payable	407	11	84					
June 30	Accts Payable	417	11	170					
July 31	Accts Payable	479	11	179					
Aug 31	Accts Payable	479	11	175					
Sept 30	Accts Payable	479	11	175					
Oct 31	Accts Payable	479	11	175					
Nov 30	Accts Payable	479	11	175					
Dec 31	Accts Payable	479	11	175					
Jan 31	Accts Payable	479	11	175					
Feb 27	Accts Payable	479	11	175					
Mar 31	Accts Payable	479	11	175					
Apr 30	Accts Payable	479	11	175					
May 31	Accts Payable	479	11	175					
June 30	Accts Payable	479	11	175					
July 31	Accts Payable	479	11	175					
Aug 31	Accts Payable	479	11	175					
Sept 30	Accts Payable	479	11	175					
Oct 31	Accts Payable	479	11	175					
Nov 30	Accts Payable	479	11	175					
Dec 31	Accts Payable	479	11	175					

## Real Estate &amp; Buildings

Oct 31	Forwarded	424	11	474	Feb 27	Accts Payable	511	11	467
Nov 30	Accts Payable	465	11	175					
Dec 31	Accts Payable	465	11	175					
Jan 31	Accts Payable	465	11	175					
Feb 27	Accts Payable	465	11	175					
Mar 31	Accts Payable	465	11	175					
Apr 30	Accts Payable	465	11	175					
May 31	Accts Payable	465	11	175					
June 30	Accts Payable	465	11	175					
July 31	Accts Payable	465	11	175					
Aug 31	Accts Payable	465	11	175					
Sept 30	Accts Payable	465	11	175					
Oct 31	Accts Payable	465	11	175					
Nov 30	Accts Payable	465	11	175					
Dec 31	Accts Payable	465	11	175					

Jan 31	Balance	424	11	26	Feb 27	Accts Payable	511	11	467
Feb 27	Accts Payable	511	11	467					
Mar 31	Accts Payable	511	11	467					
Apr 30	Accts Payable	511	11	467					
May 31	Accts Payable	511	11	467					
June 30	Accts Payable	511	11	467					
July 31	Accts Payable	511	11	467					
Aug 31	Accts Payable	511	11	467					
Sept 30	Accts Payable	511	11	467					
Oct 31	Accts Payable	511	11	467					
Nov 30	Accts Payable	511	11	467					
Dec 31	Accts Payable	511	11	467					

Jan 31	Balance	424	11	26	Feb 27	Accts Payable	511	11	467
Feb 27	Accts Payable	511	11	467					
Mar 31	Accts Payable	511	11	467					
Apr 30	Accts Payable	511	11	467					
May 31	Accts Payable	511	11	467					
June 30	Accts Payable	511	11	467					
July 31	Accts Payable	511	11	467					
Aug 31	Accts Payable	511	11	467					
Sept 30	Accts Payable	511	11	467					
Oct 31	Accts Payable	511	11	467					
Nov 30	Accts Payable	511	11	467					
Dec 31	Accts Payable	511	11	467					

Jan 31	Balance	424	11	26	Feb 27	Accts Payable	511	11	467
Feb 27	Accts Payable	511	11	467					
Mar 31	Accts Payable	511	11	467					
Apr 30	Accts Payable	511	11	467					
May 31	Accts Payable	511	11	467					
June 30	Accts Payable	511	11	467					
July 31	Accts Payable	511	11	467					
Aug 31	Accts Payable	511	11	467					
Sept 30	Accts Payable	511	11	467					
Oct 31	Accts Payable	511	11	467					
Nov 30	Accts Payable	511	11	467					
Dec 31	Accts Payable	511	11	467					
Jan 31	Accts Payable	511	11	467					
Feb 27	Accts Payable	511	11	467					
Mar 31	Accts Payable	511	11	467					
Apr 30	Accts Payable	511	11	467					
May 31	Accts Payable	511	11	467					
June 30	Accts Payable	511	11	467					
July 31	Accts Payable	511	11	467					
Aug 31	Accts Payable	511	11	467					
Sept 30	Accts Payable	511	11	467					
Oct 31	Accts Payable	511	11	467					
Nov 30	Accts Payable	511	11	467					
Dec 31	Accts Payable	511	11	467					

*Duke Mfg Co. Stock Account*

<sup>1916</sup> Jul '29	Prop. Co. Loan 277	250000.00	<sup>1916</sup> Jul '29	Thos. Adams	250000.00
	Price Recd.	100			
		250000.00			250000.00



Profit & Loss

[illegible]

## Profit &amp; Loss

1913	Feb 78	Forwarded	279	40618.83	Feb 78	Forwarded	279	40618.83
		Accts Receivable	165	40618.83			Sales	71770501.71
		Manufacturing	164	1708.50				
		Sundries	168	248.93				
		"	171	732.77				
		Balance	80	311.66				
				96518.178				96518.178
1913	Feb 78	Sundries	208	3484.50	1913	Feb 78	Balance	58112.30
		Manufacturing	215	9823.66			Accts Receivable	7500.00
		Acct Receivable	215	94			"	100.00
		Sundries	215	14759.30			Unclaimed Wages	215
		Acct Payable	216	89.40			Sales	27334081.51
		Manufacturing	218	1166.00				
		Acct Receivable	218	4.13				
		Sundries	223	113.20				
		Balance	117	1045.27				
				229980.48				229980.48

1913	Feb 27	Accts Receivable	269	60.00	1914	Feb 27	Balance	7171165.47
		" Payable	269	58.4			Unclaimed Wages	275
		Manufacturing	273	1028.56			"	338.14
		Acct Payable	275	81.00			Sales	2747082.45
		Automobile Exp	279	100.00			Balance	45000.00
		Losses	279	154162.65				70555.80
				1571641.64				1571641.64
1913	Feb 27	Balance		70555.90	1914	Feb 27	Unclaimed Wages	275
		"		90483.58			"	338.14
				161044.48				161044.48

1914	Feb 28	Good Interest	369	70.00	1915	Feb 28	Balance	90343.88
		Costs		51401.106			Unclaimed Wages	372
		Manufacturing		305.00			"	63.85
		Acct Receivable	374	254.6			Fire Loss	372
		Sundries	378	48171.95			Acct Payable	374
		Manufacturing		271.50			Acct Payable	377
		Acct Receivable		27000.00			Balance	377
				272117.95				272117.95

1081201.89

## Profit &amp; Loss

1916	Feb 29	Acct. Exp. & Bkgs.	303	22058.13	1916	Feb 29	Forwarded	226027.54
		Accum. int. on Bonds		6000.00				
		Accum. Pay Roll		13787.94				
		Accum. Taxes	304	9000.00				
		Return for Bad Debt		3877.50				
				16444.20				

PAID 1916 12 12 1916  
G. W. S.

1916 33 00  
9000.00  
10000.00

## Notes Receivable

1897	Jan 6	General Account A	341	2000.00	1897	Nov 30	Cash	91.1	645.00
	Oct 3	Account Receivable	341	670.00		Dec 31		99.1	645.00
				670.00		Jan 28		6.1	645.00
				670.00		Feb 29	Account Receivable	149.1	645.00
				670.00			Balance		645.00
				670.00					645.00
1908	March 1	Balance		2000.00	1897	Dec 31	Spaid Oct 11	17.1	2000.00
	Oct 11	Accounts Payable	11	2340.16		Jan 31	Cash	115.1	340.16
				2340.16					2340.16
1910	Feb 1	Accts Payable	35.1	2143.74	1898	Feb 78	Accts Payable	77.1	2143.74
	Feb 39		39	2143.74			Balance		2143.74
				2143.74					2143.74
1911	March 1	Balance		2143.74	1898	June 30	Accts Payable	95.1	2143.74
	June 1	Accts Payable	15.1	2143.74		Dec 5		17.1	2143.74
	Dec 1		19.1	2143.74		Dec 28	Balance		2143.74
				2143.74					2143.74
1912	April 1	Balance		2143.74	1898	April 1	Accts Payable	28.1	2143.74
	April 1	Accts Payable	53.1	2143.74		July 16	Cash	128.1	2143.74
	Sept 23	Edwin Strong & Co	55.1	2143.74		Sept 30	Thos A Edmond	143.1	2143.74
			56.1	2143.74		Oct 8		149.1	2143.74
			57.1	2143.74		Nov 78	Balance		2143.74
			58.1	2143.74					2143.74
			59.1	2143.74					2143.74
			60.1	2143.74					2143.74
			61.1	2143.74					2143.74
			62.1	2143.74					2143.74
			63.1	2143.74					2143.74
			64.1	2143.74					2143.74
			65.1	2143.74					2143.74
			66.1	2143.74					2143.74
			67.1	2143.74					2143.74
			68.1	2143.74					2143.74
			69.1	2143.74					2143.74
			70.1	2143.74					2143.74
			71.1	2143.74					2143.74
			72.1	2143.74					2143.74
			73.1	2143.74					2143.74
			74.1	2143.74					2143.74
			75.1	2143.74					2143.74
			76.1	2143.74					2143.74
			77.1	2143.74					2143.74
			78.1	2143.74					2143.74
			79.1	2143.74					2143.74
			80.1	2143.74					2143.74
			81.1	2143.74					2143.74
			82.1	2143.74					2143.74
			83.1	2143.74					2143.74
			84.1	2143.74					2143.74
			85.1	2143.74					2143.74
			86.1	2143.74					2143.74
			87.1	2143.74					2143.74
			88.1	2143.74					2143.74
			89.1	2143.74					2143.74
			90.1	2143.74					2143.74
			91.1	2143.74					2143.74
			92.1	2143.74					2143.74
			93.1	2143.74					2143.74
			94.1	2143.74					2143.74
			95.1	2143.74					2143.74
			96.1	2143.74					2143.74
			97.1	2143.74					2143.74
			98.1	2143.74					2143.74
			99.1	2143.74					2143.74
			100.1	2143.74					2143.74
			101.1	2143.74					2143.74
			102.1	2143.74					2143.74
			103.1	2143.74					2143.74
			104.1	2143.74					2143.74
			105.1	2143.74					2143.74
			106.1	2143.74					2143.74
			107.1	2143.74					2143.74
			108.1	2143.74					2143.74
			109.1	2143.74					2143.74
			110.1	2143.74					2143.74
			111.1	2143.74					2143.74
			112.1	2143.74					2143.74
			113.1	2143.74					2143.74
			114.1	2143.74					2143.74
			115.1	2143.74					2143.74
			116.1	2143.74					2143.74
			117.1	2143.74					2143.74
			118.1	2143.74					2143.74
			119.1	2143.74					2143.74
			120.1	2143.74					2143.74
			121.1	2143.74					2143.74
			122.1	2143.74					2143.74
			123.1	2143.74					2143.74
			124.1	2143.74					2143.74
			125.1	2143.74					2143.74
			126.1	2143.74					2143.74
			127.1	2143.74					2143.74
			128.1	2143.74					2143.74
			129.1	2143.74					2143.74
			130.1	2143.74					2143.74
			131.1	2143.74					2143.74
			132.1	2143.74					2143.74
			133.1	2143.74					2143.74
			134.1	2143.74					2143.74
			135.1	2143.74					2143.74
			136.1	2143.74					2143.74
			137.1	2143.74					2143.74
			138.1	2143.74					2143.74
			139.1	2143.74					2143.74
			140.1	2143.74					2143.74
			141.1	2143.74					2143.74
			142.1	2143.74					2143.74
			143.1	2143.74					2143.74
			144.1	2143.74					2143.74
			145.1	2143.74					2143.74
			146.1	2143.74					2143.74
			147.1	2143.74					2143.74
			148.1	2143.74					2143.74
			149.1	2143.74					2143.74
			150.1	2143.74					2143.74
			151.1	2143.74					2143.74
			152.1	2143.74					2143.74
			153.1	2143.74					2143.74
			154.1	2143.74					2143.74
			155.1	2143.74					2143.74
			156.1	2143.74					2143.74
			157.1	2143.74					2143.74
			158.1	2143.74					2143.74
			159.1	2143.74					2143.74
			160.1	2143.74					2143.74
			161.1	2143.74					2143.74
			162.1	2143.74					2143.74
			163.1	2143.74					2143.74
			164.1	2143.74					2143.74
			165.1	2143.74					2143.74
			166.1	2143.74					2143.74
			167.1	2143.74					2143.74
			168.1	2143.74					2143.74
			169.1	2143.74					2143.74
			170.1	2143.74					2143.74
			171.1	2143.74					2143.74
			172.1	2143.74					2143.74
			173.1	2143.74					2143.74
			174.1	2143.74					2143.74
			175.1	2143.74					2143.74
			176.1	2143.74					2143.74
			177.1	2143.74					2143.74
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			183.1	2143.74					2143.74
			184.1	2143.74					2143.74
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			190.1	2143.74					2143.74
			191.1	2143.74					2143.74
			192.1	2143.74					2143.74
			193.1	2143.74					2143.74
			194.1	2143.74					2143.74
			195.1	2143.74					2143.74
			196.1	2143.74					2143.74
			197.1	2143.74					2143.74
			198.1	2143.74					2143.74
			199.1	2143.74					2143.74
			200.1	2143.74					2143.74

## Special Account A

Aug 21 <sup>1927</sup> Notice Received 17, 2000.00 June 6 Notice Announced 2000.00

## Fidelity Trust Co. Life Insurance Account

1917									
July 1	Cash	20	49.1	98.14/18	Balance			11/100.25	
"	"	"	"	11/280.50					
Oct 30			10	11/280.50					
				11/280.25				11/280.25	
1918									
March 1	Balance			11/100.25	July 7	Cash	49.1	11/291.12	
Apr 31	Cash	29.1		11/129.34					
June 30	Insurance	12		11/117.55					
				11/291.12				11/291.12	

Liability Insurance Reserve Fund

Liability Insurance Reserve Fund					
Oct 31	Cash Payable	349.75	July 31	Accounts Payable	349.75
Nov 30	"	123.00			1280.50
Dec 31	"	127.76			
Jan 31	"	112.29	Sept 29	Accounts Payable	369.
Feb 29	"	112.03			55.54
%	Gen. Expense	371.			
	Balances	573.3			
		1256.07			1256.07
May 30	Cash Pay-ble	573.3	March 1	P Balancer	1168.89
June 1	To Ins. Reserve Fund	730.7	June 30	Accounts Payable	29.
	To Ins. Reserve Fund	534.86			730.7
		534.86			539.94

## Reserve for Water

1911	Dec 30	Accts Payable	1186.1	1911	July 31	General Expense	100.1	1750.00
		General Expense	1174	1911	Aug 31	"	101.1	1750.00
		Balance		1911	Sept 30	"	101.1	1750.00
				1911	Oct 31	"	106.1	1750.00
				1911	Nov 30	"	109.1	1750.00
				1911	Dec 31	"	115.1	1750.00
				1911	Jan 29	"	119.1	1750.00
				1911	Feb 29	"		1750.00
				1911				1600.00
1911	Jan 29	Accts Payable	1637.77	1911	Mar 1	Balance		1600.00
		General Expense	89.1	1911	Mar 30	General Expense	126.1	1750.00
		Balance		1911	Apr 30	"	128.1	1750.00
				1911	May 31	"	131.1	1750.00
				1911	Jun 30	"	135.1	1750.00
				1911	July 31	"	138.1	1750.00
				1911	Aug 31	"	141.1	1750.00
				1911	Sept 30	"	144.1	1750.00
				1911	Oct 31	"	147.1	1750.00
				1911	Nov 30	"	150.1	1750.00
				1911	Dec 31	"	153.1	1750.00
				1911	Jan 31	"	156.1	1750.00
				1911	Feb 28	"	159.1	1750.00
				1911				1614.00
1912				1912				3840.73
1912	Jan 31	Accts Payable	1650.07	1912	Mar 1	Balance		3840.73
		General Expense	221.65	1912	Mar 31	General Expense	175.1	1750.00
		Balance		1912	Apr 30	"	178.1	1750.00
				1912	May 31	"	181.1	1750.00
				1912	Jun 30	"	184.1	1750.00
				1912	Jul 31	"	187.1	1750.00
				1912	Aug 30	"	190.1	1750.00
				1912	Sept 30	"	193.1	1750.00
				1912	Oct 31	"	196.1	1750.00
				1912	Nov 30	"	199.1	1750.00
				1912	Dec 31	"	202.1	1750.00
				1912	Jan 31	"	205.1	1750.00
				1912	Feb 28	"	208.1	1750.00
				1912				2170.00
				1912				219.1
				1912				4166.72
1913	May 29	Forwarded	1875.00	1913	Mar 1	Balance		4166.72
				1913	Mar 31	General Expense	215.1	1750.00
				1913	Apr 30	"	218.1	1750.00
				1913	May 29	"	221.1	1750.00

## Reserve for Water

1911	July 31	Reg. of Dist.	311.2	1911	May 29	Forwarded	296.1	1875.00
	Dec 31	"	325.1	1911	Jun 30	General Expense	230.1	1750.00
				1911	July 31	"	234.1	1750.00
	July 27	Balance		1911	Aug 31	"	237.1	1750.00
				1911	Sept 30	"	240.1	1750.00
				1911	Oct 31	"	243.1	1750.00
				1911	Nov 30	"	246.1	1750.00
				1911	Dec 31	"	249.1	1750.00
				1911	Jan 30	"	252.1	1750.00
				1911	Feb 27	"	255.1	1750.00
				1911				1875.00
				1911				3840.73
				1911				5167.05
1915	May 31	Reg. of Dist.	487.1	1915	Mar 1	Balance		7500.00
		General Expense	202.1	1915				7500.00
				1915				7500.00

Fire Insurance Reserve Fund

1907		1908		
Oct 15	Transferred to Res. Fund	355.2	90.00	
Sept 27	Liab. Payable	178.1	1406.36	
	Balance		50.27.57	
			981.41.8	
1911		1912		
June 30	Transferred to Res. Fund	13.1	522.51.6	
			823.51.6	
			Apr 26 Liab. Payable	2.1
				823.51.6

No more payments to be made to this f/c





Saevage

1907									
Nov 31	Acct Payable	36rs	50000		Balance			50000	
1908									
Mar 1	P Balance		5000	1908	Acct Payable	12		54771	
				27	Profit from	24r		75029	
			50000					50000	

# Goodwin Mfg Co. Settlement

1911  
 Nor 30 Accts Payable 1101 10 14 6 17 17 Feb 29 Profit Loss 1701 10 14 6 17 17

# Insurance Bureau Fund

1908	1909	1910
June 30 General Expense 14	300	from 30th Sept 1908 to 1st Oct 1908 10
July 31 Cash 35	46 00	from 1st Oct 1908 to 1st Nov 1908 10
Aug 31 Cash 35	10 19 1/2	from 1st Nov 1908 to 1st Dec 1908 10
Sept 30 Cash 46	21 26	from 1st Dec 1908 to 1st Jan 1909 10
Oct 31 Cash 60	31 26	from 1st Jan 1909 to 1st Feb 1909 10
Nov 30 Cash 72	14 75	from 1st Feb 1909 to 1st Mar 1909 10
Dec 31 Cash 82	138 85	from 1st Mar 1909 to 1st Apr 1909 10
Jan 31 Cash 96	14 50	from 1st Apr 1909 to 1st May 1909 10
Feb 27 Cash 120	20 90	from 1st May 1909 to 1st Jun 1909 10
" 28	23 16	from 1st Jun 1909 to 1st Jul 1909 10
" 120	34 18	from 1st Jul 1909 to 1st Aug 1909 10
Balance	20 20 00	from 1st Aug 1909 to 1st Sep 1909 10
	21206 10	from 1st Sep 1909 to 1st Oct 1909 10

1909	1910	1911
Mar 31 Accts Payable 129	73 14	Balance 20 20 00
Apr 30 Cash 140	20 50	from 1st Oct 1909 to 1st Nov 1909 10
May 31 General Expense 35	236 00	from 1st Nov 1909 to 1st Dec 1909 10
June 30 Accts Payable 150	109 50	from 1st Dec 1909 to 1st Jan 1910 10
July 31 Cash 160	173 14	from 1st Jan 1910 to 1st Feb 1910 10
Aug 31 Cash 172	177 50	from 1st Feb 1910 to 1st Mar 1910 10
Sept 30 Cash 154	156 80	from 1st Mar 1910 to 1st Apr 1910 10
Oct 30 Cash 213	200 00	from 1st Apr 1910 to 1st May 1910 10
Nov 31 Cash 225	70 44 1/2	from 1st May 1910 to 1st Jun 1910 10
Dec 31 Cash 46	91 11	from 1st Jun 1910 to 1st Jul 1910 10
Jan 31 Cash 237	27 00	from 1st Jul 1910 to 1st Aug 1910 10
Feb 28 Cash 209	52 00	from 1st Aug 1910 to 1st Sep 1910 10
Balance	30 25 11 1/2	from 1st Sep 1910 to 1st Oct 1910 10
	32193 45	from 1st Oct 1910 to 1st Nov 1910 10

1910	1911	1912
Mar 31 Account Payable 261 6	60 00	Balance 30 25 11 1/2
April 30 Cash 270 6	14 50	from 1st Nov 1910 to 1st Dec 1910 10
May 31 Cash 279 6	28 75	from 1st Dec 1910 to 1st Jan 1911 10
June 30 Insurance Bureau Bonds 59 4	61 00	from 1st Jan 1911 to 1st Feb 1911 10
July 31 Insurance Bureau Bonds 59 4	27 88 3/4	from 1st Feb 1911 to 1st Mar 1911 10
Aug 30 Account Payable 288	14 90	from 1st Mar 1911 to 1st Apr 1911 10
Sept 30 Cash 308	21 26	from 1st Apr 1911 to 1st May 1911 10
Oct 31 Cash 318	55 50	from 1st May 1911 to 1st Jun 1911 10
Nov 31 Cash 330	11 80	from 1st Jun 1911 to 1st Jul 1911 10
Dec 31 Cash 353	70 00	from 1st Jul 1911 to 1st Aug 1911 10
Jan 31 Cash 361	10 00	from 1st Aug 1911 to 1st Sep 1911 10
Feb 28 Cash 374	10 00	from 1st Sep 1911 to 1st Oct 1911 10
Balance	57 30 3/4	from 1st Oct 1911 to 1st Nov 1911 10



Borrowed from Insurance Reserve Fund

1911	Jan 16	Cash	112	98,888.32	1911	May 19	Insurance Reserve Fund	60	27,888.32
	Feb 28	Balance	174	10,000.00					
				10,000.00					
				79,888.32					79,888.32
1911	Apr 21	Cash	141	10,000.00	1911	May 1	Balance		10,000.00
	Feb 26		74	15,000.00		Nov 9	Cash	45	75,000.00
		Balance	79	10,000.00					
				35,000.00					35,000.00
1912	May 15	Cash	87	10,000.00	1912	May 1	Balance		10,000.00
	Feb 28	Balance	74	15,000.00		Nov 30	Cash	70	75,000.00
				55,000.00		Jan 8		73	70,000.00
				55,000.00					55,000.00
1915	July 28	Profit 15000	277	45,000.00	1913	May 1	Balance		45,000.00

## Edison Storage Battery Co.

[illegible]

## Edison Storage Battery Co.

[illegible]

## Edison Storage Battery Co.

Jan 31	Forwarded	317	25637.53	Jul 31	Accts Payable	287	1245.09
Feb 28	Accts Receivable	1726	2776.26	Aug 31	"	240	1493.55
"	"	2165	622.5	Sept 30	"	251	1459.91
"	Accts Payable	2165	109.41	Oct 31	Accts Receivable	261	158.14
"	"	"	838	Nov 30	"	268	1145.199
"	"	"	57.14	Dec 31	Payable	"	"
"	"	"	50832.53				
1914				1915			
Mar 31	Balance	"	25637.53	Jan 31	Accts Payable	287	1245.09
"	"	"	"	"	"	240	1493.55
"	"	"	"	"	"	251	1459.91
"	"	"	"	"	"	261	158.14
"	"	"	"	"	"	268	1145.199
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## Edison Manufacturing Co.

1909	Jan 31	Cash Receivable	46	13,298.26	1909	Dec 31	Accounts Receivable	45	13,969.77
	Feb 28	Balance	49	206,596.66					
				71,111.55					
				129,699.77					129,699.77
1910	Mar 31	Accounts Receivable	56	11,071.73	1910	Mar 1	Balance		77,461.55
	Apr 30	"	62	7,891.84		Apr 30	Cash Receivable	57	69,669.79
	May 31	"	66	2,897.09		May 31	"	59	1,238,890.4
	Jun 30	"	68	1,824,596.66		Jun 30	"	61	1,995,739.1
	Jul 31	"	70	1,121,269		Jul 31	"	71	1,552,324.6
	Aug 31	"	72	1,251,059		Aug 31	Balance		1,251,071.6
	Sep 30	"	75	1,959,653					
	Oct 31	"	78	2,847,594					
				116,107.25					116,107.25
1911	Mar 1	Balance		12,267.16	1911	Mar 1	Thomas Edison, Inc.	89	12,267.16



Thomas A. Edison, Inc

Oct	31	Forwarded	322	2985360	Oct	31	Forwarded	322	2986716
"	"	Accts Payable	760	1032391	Jan	31	Accts Receivable	772	5771468
"	"	Accts Receivable	"	4171587	Feb	28	Sales	772	5744793
Nov	29	Accts Payable	7023	1594401	"	"	Accts Payable	723	3119925
"	"	Accts Receivable	"	3727150	"	"	Balance	"	5627054
Dec	31	Accts Payable	706	1306049					
"	"	Accts Receivable	7071	150					
		"	"	10950653					
Jan	31	Accts Payable	711	1195408					
Feb	28	Accts Receivable	716	3554615					
"	"	Accts Payable	716	2491379					
		Sales	721	3554615					
				75033678					75033678

1914	Mar 7	Balance	363.67	Mar 30	Acct. Payable	237.14	643.81
	31	Acct. Payable	751.11	May 29	" Receivable	730.00	730.00
		" Receivable	751.11	June 30	" "	733.13	733.13
		" Receivable	808.94	July 31	" "	716.11	716.11
		" Receivable	755.43	Aug 31	" Payable	716.11	716.11
Apr 30		" Payable	755.43	Sept 30	" Receivable	740.00	740.00
May 29		" Payable	755.43	Oct 31	" Payable	741.00	741.00
July 31		" Receivable	867.37	Nov 30	" Receivable	741.00	741.00
		" Receivable	749.14	Dec 31	Balance Expense	741.00	741.00
		" Payable	749.14	1915	Acct. Payable	741.00	741.00
Aug 31		" Receivable	830.55	Jan 30	" Receivable	741.00	741.00
Oct 31		" Receivable	830.55	Feb 27	" Payable	741.00	741.00
Nov 30		" Payable	751.11	Mar 31	" Receivable	741.00	741.00
		" Payable	751.11	Apr 30	" Payable	741.00	741.00
		" Receivable	755.43	May 31	" Receivable	741.00	741.00
Dec 31		" Receivable	755.43	June 30	" Receivable	741.00	741.00
		" Receivable	755.43	July 31	" Receivable	741.00	741.00
		" Payable	755.43	Aug 31	" Receivable	741.00	741.00
		" Payable	755.43	Sept 30	" Receivable	741.00	741.00
		" Payable	755.43	Oct 31	" Receivable	741.00	741.00
		" Payable	755.43	Nov 30	" Receivable	741.00	741.00
		" Payable	755.43	Dec 31	" Receivable	741.00	741.00
		" Payable	755.43	1916	" "	741.00	741.00
		" Payable	755.43	Jan 31	" "	741.00	741.00
		" Payable	755.43	Feb 28	" "	741.00	741.00
		" Payable	755.43	Mar 31	" "	741.00	741.00
		" Payable	755.43	Apr 30	" "	741.00	741.00
		" Payable	755.43	May 31	" "	741.00	741.00
		" Payable	755.43	June 30	" "	741.00	741.00
		" Payable	755.43	July 31	" "	741.00	741.00
		" Payable	755.43	Aug 31	" "	741.00	741.00
		" Payable	755.43	Sept 30	" "	741.00	741.00
		" Payable	755.43	Oct 31	" "	741.00	741.00
		" Payable	755.43	Nov 30	" "	741.00	741.00
		" Payable	755.43	Dec 31	" "	741.00	741.00
		" Payable	755.43	1917	" "	741.00	741.00
		" Payable	755.43	Jan 31	" "	741.00	741.00
		" Payable	755.43	Feb 28	" "	741.00	741.00
		" Payable	755.43	Mar 31	" "	741.00	741.00
		" Payable	755.43	Apr 30	" "	741.00	741.00
		" Payable	755.43	May 31	" "	741.00	741.00
		" Payable	755.43	June 30	" "	741.00	741.00
		" Payable	755.43	July 31	" "	741.00	741.00
		" Payable	755.43	Aug 31	" "	741.00	741.00
		" Payable	755.43	Sept 30	" "	741.00	741.00
		" Payable	755.43	Oct 31	" "	741.00	741.00
		" Payable	755.43	Nov 30	" "	741.00	741.00
		" Payable	755.43	Dec 31	" "	741.00	741.00
		" Payable	755.43	1918	" "	741.00	741.00
		" Payable	755.43	Jan 31	" "	741.00	741.00
		" Payable	755.43	Feb 28	" "	741.00	741.00
		" Payable	755.43	Mar 31	" "	741.00	741.00
		" Payable	755.43	Apr 30	" "	741.00	741.00
		" Payable	755.43	May 31	" "	741.00	741.00
		" Payable	755.43	June 30	" "	741.00	741.00
		" Payable	755.43	July 31	" "	741.00	741.00
		" Payable	755.43	Aug 31	" "	741.00	741.00
		" Payable	755.43	Sept 30	" "	741.00	741.00
		" Payable	755.43	Oct 31	" "	741.00	

7/15		7/20/14/16		9/20/14/16	
May 31	Accounts Payable 280	14,585.85	May 1	Balance	78,187.51
	Accounts Receivable 251	546,846.46			
	Accounts Payable	15,180.44	Apr 30	Accts. Payable 256	35,333.36
		10,544.13			
Apr 30	Accts. Payable 285	17,992.92	May 31	Accts. Receivable 280	80,956.67
	Receivable 286	95,707.05		Accts. Payable 282	15,873.91
	Accts. Payable 288	8,276.66	June 30	Accts. Receivable 296	669,155.45
		1,277.66		Accts. Payable 285	244,998.16
June 30	Accts. Payable 292	14,744.21	July 31		116.63
		5,817.93		Accts. Receivable 302	774,323.55
July 31		11,532.28		Accts. Payable 302	93,994.31

Thomas A. Edison, Inc.

[illegible]

## Edison Business Photographs

1910	Jan 31	Credit Received	48	40 08 44	1911	Apr 31	Accounts Received	45	17 04 80
	Feb 28		49	13 24 01		May 28	Balance		17 09 05
				17 24 85					17 24 85
1910	May 1	Balance		17 24 85	1910	Apr 30	Credit Received	57	111 09
	31	Accounts Received	56	12 11 99		May 31	"	54	4 24 05
	June 30	"	67	1 05 36		June 30	"	68	2 71 93
	July 30	"	64	1 15 67		July 31	"	70	1 30 17
	Aug 31	"	66	1 24 71		Aug 31	"	71	6 35 65
	Sept 28	"	78	11 25 57		Sept 31	"	72	2 19 78
						Oct 31	"	75	2 31 14
						Nov 28	Balance		17 04 01
									38 58 16
1911	Feb 1	Balance		19 25 41	1911	Feb 1	Thomas A. Edison	89	17 54 01

Taxes Accrued

Month	Day	Account Payable	Amount	Month	Day	Account Payable	Amount
May	31		108.74	June	30	Harold Egan	97.60
Aug	31		100.00	July	31		99.00
Nov	30		456.4	Aug	31		107.00
Feb	29		511.6	Sept	30		106.00
				Oct	31		106.00
				Nov	30		109.00
				Dec	31		112.00
				Jan	31		115.00
				Feb	29		119.00

1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan

1913		1914		1915		1916		1917		1918		1919		1920		1921		1922		1923		1924		1925		1926		1927		1928		1929		1930		1931		1932		1933		1934		1935		1936		1937		1938		1939		1940		1941		1942		1943		1944		1945		1946		1947		1948		1949		1950		1951		1952		1953		1954		1955		1956		1957		1958		1959		1960		1961		1962		1963		1964		1965		1966		1967		1968		1969		1970		1971		1972		1973		1974		1975		1976		1977		1978		1979		1980		1981		1982		1983		1984		1985		1986		1987		1988		1989		1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021		2022		2023		2024		2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		2036		2037		2038		2039		2040		2041		2042		2043		2044		2045		2046		2047		2048		2049		2050		2051		2052		2053		2054		2055		2056		2057		2058		2059		2060		2061		2062		2063		2064		2065		2066		2067		2068		2069		2070		2071		2072		2073		2074		2075		2076		2077		2078		2079		2080		2081		2082		2083		2084		2085		2086		2087		2088		2089		2090		2091		2092		2093		2094		2095		2096		2097		2098		2099		2100	
Jan	31	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293																																																																																																																																																																																																			

9/1/6			9/1/039
Meib	7	Balance	310320
	31	Reg of West	8900

Tapes Accrued

Month	Day	Forwarded	33c	37c	40c	43c	46c	49c	52c	55c	58c	61c	64c	67c	70c	73c	76c	79c	82c	85c	88c	91c	94c	97c	100c
Jan	31	Forwarded	33c	37c	40c	43c	46c	49c	52c	55c	58c	61c	64c	67c	70c	73c	76c	79c	82c	85c	88c	91c	94c	97c	100c
Feb	28	Forwarded	33c	37c	40c	43c	46c	49c	52c	55c	58c	61c	64c	67c	70c	73c	76c	79c	82c	85c	88c	91c	94c	97c	100c
Mar	31	Forwarded	33c	37c	40c	43c	46c	49c	52c	55c	58c	61c	64c	67c	70c	73c	76c	79c	82c	85c	88c	91c	94c	97c	100c
Apr	30	Forwarded	33c	37c	40c	43c	46c	49c	52c	55c	58c	61c	64c	67c	70c	73c	76c	79c	82c	85c	88c	91c	94c	97c	100c
May	31	Forwarded	33c	37c	40c	43c	46c	49c	52c	55c	58c	61c	64c	67c	70c	73c	76c	79c	82c	85c	88c	91c	94c	97c	100c
Jun	30	Forwarded	33c	37c	40c	43c	46c	49c	52c	55c	58c	61c	64c	67c	70c	73c	76c	79c	82c	85c	88c	91c	94c	97c	100c
Jul	31	Forwarded	33c	37c	40c	43c	46c	49c	52c	55c	58c	61c	64c	67c	70c	73c	76c	79c	82c	85c	88c	91c	94c	97c	100c
Aug	31	Forwarded	33c	37c	40c	43c	46c	49c	52c	55c	58c	61c	64c	67c	70c	73c	76c	79c	82c	85c	88c	91c	94c	97c	100c
Sep	30	Forwarded	33c	37c	40c	43c	46c	49c	52c	55c	58c	61c	64c	67c	70c	73c	76c	79c	82c	85c	88c	91c	94c	97c	100c
Oct	31	Forwarded	33c	37c	40c	43c	46c	49c	52c	55c	58c	61c	64c	67c	70c	73c	76c	79c	82c	85c	88c	91c	94c	97c	100c
Nov	30	Forwarded	33c	37c	40c	43c	46c	49c	52c	55c	58c	61c	64c	67c	70c	73c	76c	79c	82c	85c	88c	91c	94c	97c	100c
Dec	31	Forwarded	33c	37c	40c	43c	46c	49c	52c	55c	58c	61c	64c	67c	70c	73c	76c	79c	82c	85c	88c	91c	94c	97c	100c

1910				1445.599		1. Balance		5375.524
Mar. 1	Balance		5375.524	Mar. 31	General Expense	211	833.62	
Apr. 30	Reg. of Dist.	11.44	61.350	Apr. 30	"	211	181.145	
July 31	"	57.7	799.99	May 31	"	233	181.144	
Aug. 31	"	57.7	5375.524	June 30	"	233	529.73	
				Aug. 31	"	313	518.44	
					"		518.44	
				Oct. "	"	211	499.71	
					"		167.16	
				Nov. 30	"	233	167.16	
				Dec. 31	"	211	167.16	
							167.16	
				Jan. 31	General Expense	553	435.55	
				Feb. 29	"	570	299.55	
							299.55	

[illegible]

## National Photograph Co.

1899	July 28	Accts Receivable	49	29981.77	1899	Dec 31	Accts Receivable	45	37909.90
		Sales	52	026989.57	1900	Jan 31		45	57236.72
		Balance		28141.55					
				436324.62					436324.62
1910	Mar 31	Accts Receivable	56	10007.21	1910	Mar 1	Balance	23	412.93
Apr 30			57	64730.28	May 31		Accts Receivable	59	132424.66
May 19		General Expense	59	29675.00	June 30			62	49977.12
		Accts Receivable	61	21332.32	July 30			64	248570.97
Sept 30		Accts Receivable	68	25829.69	Aug 31			66	2719574.44
Oct 31			70	39577.16	Sept 30			75	1488723.31
Nov 30			71	38951.34	Oct 31			78	150932.68
Dec 31			72	108467.67			Sales	85	116591.03
July 28		Sales	82	106581.03					
		General Expense	86	10500.00					
		Sales	87	111047.06					
		Balance		100011.67					
				595206.44					595206.44
1911	Mar 1	Thomas Edison Co	89	100731.67	1911	Mar 1	Balance	10	0931.67



## Bates Mfg. Co.

1905			1906				
July 31	Archer's Quincke	300	11 921 19	July 31	Archer's Quincke	301	11 921 19
Aug 31	"	305	11 921 19	Aug 31	"	307	11 921 19
Sept 3	"	310	11 921 19	Sept 3	"	310	11 921 19
" 31	"	315	11 921 19	" 31	"	313	11 921 19
Oct 3	"	319	11 921 19	Oct 3	"	316	11 921 19
Oct 31	"	325	11 921 19	Oct 31	"	321	11 921 19
Nov 31	Lablin	325	11 921 19	Nov 31	"	323	11 921 19
			11 921 19				11 921 19



## Adjustment

Feb	28	Profit Loss	78	59.13	19	Oct	31	General Expense	69	59.13	19
Oct	31	Accts Receivable	106	149.6	1911	Feb	29	Accts Receivable	117	149.6	

## Insurance Reserve Fund

Month	Day	Description	Amount	Month	Day	Description	Amount	Month	Day	Description	Amount	Month	Day	Description	Amount
Mar	31	Forwarded	206	Mar	31	Forwarded	306	7/9	6/31						
Apr	30	Deferred Charges	177	Apr	30	Cash	524	1/20	7/1						
"	"	"	"	"	"	"	63	"	"						
"	"	Accts Payable	750	"	"	"	"	"	"						
May	31	Deferred Charges	180	May	31	Cash	100	1/20	7/1						
"	"	"	181	"	"	"	"	"	"						
"	"	Accts Payable	138	"	"	"	"	"	"						
June	30	Deferred Charges	186	June	30	"	"	"	"						
"	"	"	186	"	"	"	"	"	"						
July	31	Deferred Charges	188	July	31	"	"	"	"						
"	"	"	188	"	"	"	"	"	"						
Aug	31	Deferred Charges	192	Aug	31	"	"	"	"						
"	"	"	192	"	"	"	"	"	"						
Sept	30	Deferred Charges	195	Sept	30	"	"	"	"						
"	"	"	195	"	"	"	"	"	"						
Oct	31	Deferred Charges	199	Oct	31	"	"	"	"						
"	"	"	199	"	"	"	"	"	"						
Nov	30	Deferred Charges	200	Nov	30	"	"	"	"						
"	"	"	200	"	"	"	"	"	"						
Dec	31	Deferred Charges	205	Dec	31	"	"	"	"						
"	"	"	205	"	"	"	"	"	"						
Jan	31	Deferred Charges	207	Jan	31	"	"	"	"						
"	"	"	207	"	"	"	"	"	"						
Feb	28	Deferred Charges	214	Feb	28	"	"	"	"						
"	"	"	214	"	"	"	"	"	"						
"	"	Accts Payable	784	"	"	"	"	"	"						
"	"	Balance	17634.52	"	"	"	"	"	"						

Month	Day	Description	Amount	Month	Day	Description	Amount	Month	Day	Description	Amount	Month	Day	Description	Amount
Mar	31	Deferred Charges	774	Mar	31	Balance	15037.71								
"	"	"	774	"	"	"	"	"	"						
Apr	30	Deferred Charges	774	Apr	30	Cash	33	1/20	7/1						
"	"	"	774	"	"	"	"	"	"						
May	31	Deferred Charges	774	May	31	"	"	"	"						
"	"	"	774	"	"	"	"	"	"						
June	30	Deferred Charges	774	June	30	Accts Payable	735	1/20	7/1						
"	"	"	774	"	"	"	"	"	"						
July	31	Deferred Charges	774	July	31	Cash	51	1/20	7/1						
"	"	"	774	"	"	"	"	"	"						
Aug	31	Deferred Charges	774	Aug	31	"	"	"	"						
"	"	"	774	"	"	"	"	"	"						
Sept	30	Deferred Charges	774	Sept	30	"	"	"	"						
"	"	"	774	"	"	"	"	"	"						

## Insurance Reserve Fund

[illegible]

*Trans. For Insurance*

Dec 31	1914	Deposits to Log	501	3110	Nov 31	Pay of Cash	594	12508 57
1916								12574 37 90 1/2
Jan 31	1916	Deposited Charges	554	98 69	Dec 31			6 50
Feb 29	1916		371	31 30	Jan 31			637 31 30 1/2
								6220 24
								5985
								57 1/2
								4250 1/2
								3760 820
								3760 120

*Revue for Bad Debt*

1916  
Feb 29. Receipts & Losses 5336 16412 20

Bad Sample to  
42 x 5

## United State Government Income Tax

1915		1916		1917		1918		1919	
Mar	31	Accts. Payable	213.	170.99	June 6	Cash	434	1074	
					July 6	"	514	773	
					Aug. 29	"	694	2074	
					Sept. 29	"	77	874	
					Oct. 1	"	91	1161	
					Nov. 5	"	101	1323	
					Dec. 9	"	111	1524	
					Jan. 30	"	117	1709	
				170.99				170.99	









*Sumner Photographs*  
*Calicut. Top. Series. Instrumental*

Date	Locality	No.	Time	Remarks	Remarks
Aug 20	Sumner	304	10.15	Oct 29, Sumner, Calicut	Oct 29
Oct 20	Sumner, Calicut	309	10.15		
Nov 20	"	309	10.15		
Dec 29	"	311	10.15		
					30.057



*Edison Phonograph Records*

Dec	31	Genl. Business	251	100.00	Dec	31	Genl. Business	251	100.00
		Manufacturing	324	100.00			Manufacturing	324	100.00
		Cash	324	100.00			Cash	324	100.00
Jan	1	Cash	324	100.00			Cash	324	100.00
		Genl. Bus.	251	100.00			Genl. Bus.	251	100.00
		Genl. & Man.	251	100.00			Genl. & Man.	251	100.00
Jan	31	Manufacturing	324	100.00	Jan	31	Manufacturing	324	100.00
		Cash	324	100.00			Cash	324	100.00
Feb	29	Manufacturing	324	100.00	Feb	29	Manufacturing	324	100.00
		Cash	324	100.00			Cash	324	100.00
		Genl. Bus.	251	100.00			Genl. Bus.	251	100.00
		Genl. & Man.	251	100.00			Genl. & Man.	251	100.00
		Cash	324	100.00			Cash	324	100.00
				156,761.95					156,761.95





Edison Young Hooks

County of Gloucester, N.J.

[illegible]

Later 28 pp to Current Advances

Dec 31	Cash	16	Dec 31	Line Expense	300	70067
1916			Feb 29	Accountal Payable	25	800062
Jan 31	Manufacturing	300		Labour & Material	10	70067
	Cash	25				
Feb 29	Trade Income, Income	300				
	Trade Income, Curr Adv	25				
	Accountal Current	300				
	Cash	25				
	Cost Expense					
		1,000,000				1,000,000





*L.O.H. Home Account by Dept. Field Government*

<sup>1914</sup>		<sup>1915</sup>	
Dec. 31	Machy Car Sale	500.	22,543
Dec. 31	Machy Car Sale	500.	22,543
Jan. 31	Machy Car Sale	500.	22,543
Feb. 29	Machy Car Sale	500.	22,543
Mar. 31	Machy Car Sale	500.	22,543
Apr. 30	Machy Car Sale	500.	22,543
May 31	Machy Car Sale	500.	22,543
Jun. 30	Machy Car Sale	500.	22,543
Jul. 31	Machy Car Sale	500.	22,543
Aug. 31	Machy Car Sale	500.	22,543
Sep. 30	Machy Car Sale	500.	22,543
Oct. 31	Machy Car Sale	500.	22,543
Nov. 30	Machy Car Sale	500.	22,543
Dec. 31	Machy Car Sale	500.	22,543



E. O. Wks. Peter Heiml. Mach. Engt.

1916  
Jan 31

E. O. W. B. Bates Jumb. Mach. Dept. Lead Investments

1916  
Jan 31 Machy. + Stck. 353. 906.552 <sup>1916</sup> 375 Edmund B. Bates & Co. 1916 1916

*Edison Home Works Electrical Dept Current Accounts*

Jan 31	Cash	24	1913.12	Jan 31	General Expense	309	372.13
	Manufacturing	558	25.66	Feb 28	Edison Dept. Curr. Acc.	177.75	499
Feb 29	Edison Dept. Curr. Acc.	271	16.51		" " "	579	114
	Edison Dept. Curr. Acc.		16.1		Edison Dept. Curr. Acc.		211.60
	Broke	267	499.8				
	Material	268	23.1				
	Material Expense	268	877.1				
	Material		14.16				
	Cash	32	53.44				
	General Expense	271	85.72				
			31.02				21.56

Electrical Dept. - Electric Power - and Instrument

<sup>1916</sup> Last Month's Tools 30 11/15/16 J. H. Brown & Co. 10 11/15/16

**Edison Phonograph Works Records  
Journal #4 (1901-1908)**

This journal covers the period February 1901-February 1908. Chronological entries provide information about transactions posted to various accounts and recorded in the general ledgers. The spine is stamped "Journal No. 4, E.P.W." and is labeled "Feby 1st 1901 to Feby 29th 1908." The book contains 401 numbered pages; some pages are blank. Entries on pages 148-208 are written in faint green ink and may be difficult to read.

[REDUCTION RATIO = 16:1]

Journal

No 4

E. P. W.



Orange N.J. February 1901

1

8-400

Individuals to

To Individuals & Co

Transferring amounts, amount of  
Bill Jan 31, 1901, to 1900

to Bates Archs Rec 2.50

to Bates Archs Rec 2.50

to Bates Archs Rec 2.50

to Bates Archs Rec 2.50

to Bates Archs Rec 2.50

Individuals to

To Individuals & Co

Transferring from Bates Archs Rec  
amount equal to dividend received  
on act of Receivership of Landon  
Publishing & Printing Co

to Bates Archs Rec 4.00

to Landon Archs & Pub Co 4.00

to Bates Archs Rec 4.00

to Bates Archs Rec 4.00

to Bates Archs Rec 4.00

Individuals to

To Individuals & Co

Transferring amounts

to Bates Archs Rec 4.00

to Landon Archs & Pub Co 4.00

to Bates Archs Rec 4.00

to Landon Archs & Pub Co 4.00

Individuals to

To Individuals & Co

Transferring amounts

to Bates Archs Rec 2.75

to Bates Archs Rec 2.75

to Bates Archs Rec 2.75

to Bates Archs Rec 2.75

to Bates Archs Rec 2.75

Orange N. J. February 1901

16	Dividend	722.160	
16	To Individuals to Co	722.160	
	For a dividend of 15¢ per share on all stock of the Company submitted to the Board of Directors at a Special Meeting held at Orange N. J. on Monday Evening Feb. 7, 1901. Dividend to		
16	Thos A Edison	272.210	3102.50
100	Geo. H. Randolph	10.00	15.00
100	Mrs. Thos. Edison	30.00	45.00
100	Wm. E. Johnson	5.00	7.50
1	Sam. L. Smith	5.00	7.50
100	Chas. Batchelor	240.41	372.66
100	H. B. Archibald	350.00	525.00
100	Arthur. L. Gephphone	140.00	210.00
100	Geo. E. Linder	5.00	7.50
100	J. T. M. Cherry	5.00	7.50
100	Geo. D. H. Luntz	236.75	355.13
100	Walter Luntz	317.00	475.50
8	Notes Receivable	4000.00	
18	To Individuals to Co	4000.00	
	Letter note dated Feb. 1901 payable at American Nat. Bank New York N. Y.		
100	National Bank	4000.00	

Orange N. J. Feb. 1901

85	Notes Receivable	19	
18	To Individuals to Co	4000.00	
	Harrocks note dated Feb. 1901 payable at American Nat. Bank New York N. Y.		
100	National Bank	4000.00	
18	Individuals to Co	19	
18	To Individuals to Co	107.25	107.25
	Transferring amounts		
1	Medison Co	107.25	
100	National Bank to	107.25	
18	Individuals to Co	20	
18	To Individuals to Co	3.50	3.50
	Transferring amount from 20. 1901 from St. Louis Ldg. Co. to Bates Accts Rec Ldg. Co.		
6	Stewart & Co	3.50	
100	Bates Accts Rec	3.50	
100	Stewart & Co	3.50	
18	Individuals to Co	20	
18	To Individuals to Co	2.00	2.00
	Transferring amount from St. Louis Ldg. Co. to Bates Accts Rec Ldg. Co. amount of Ldg. all from		
100	Lincoln Lumber	2.00	
100	Bates Accts Rec	2.00	
100	Lincoln Lumber	2.00	
18	Individuals to Co	10.50	
18	To Individuals to Co	10.50	
	Transferring amount of Voucher No. 1312 from St. Louis Ldg. Co. to Bates Accts Rec Ldg. Co.		
100	W. A. Foster & Co	10.50	
100	Bates Accts Rec	10.50	
1	W. A. Foster & Co	10.50	

Orange N.J. February 1901.

167	Individuals to Co.	100.00	
168	To Individuals to Co.	100.00	
	Transferring balance Feb 11, 1901 from St. Geo. Ledger to Baker Accts Per Ledger		
169	Baker Accts Payable	100.00	
170	Baker Accts Rec	100.00	
171	Baker Accts Payable	100.00	
172	To Individuals to Co.	100.00	
173	General Expenses	100.00	
174	To Individuals to Co.	100.00	
175	Salary for February 1901 Thos. A. Quinn	1000.00	
176	To Individuals to Co.	100.00	
177	To Individuals to Co.	100.00	
	Transferring balance Sept 1, 1901 of Stanley & Pattersons Account to the amount of \$100.00 then only to be paid in installments Stanley & Patterson 100.00		
178	Edison Mfg Co	100.00	
179	To Individuals to Co.	100.00	
180	To Notes Payable	100.00	
	Accepted \$100.00 due 30 days draft on being it payable at Summit Nat Bank Newark N.J. being settlement of salary balance to March 1, 1901.		
181	Thos. A. Quinn	1000.00	
182	To Individuals to Co.	100.00	
183	To Individuals to Co.	100.00	
	Transferring amount of transfer \$100.00 from St. Geo. Ledger to Baker Accts Rec Ledger		
184	J. W. Burke & Co	100.00	
185	Baker Accts Rec	100.00	
186	J. W. Burke & Co	100.00	

Orange N.J. February 1901.

187	Individuals to Co.	100.00	
188	To General Expenses	100.00	
	Amount of Baker Subvent Account debit at the settlement of accounts during February 1901. as recorded in Cash Book folios 106 to 108 both sides.		
189	To General Expenses	100.00	
190	To Individuals to Co.	100.00	
	Amount of Baker Subvent Account during February 1901. allowed in settlement of accounts as recorded in Cash Book folios 106 to 108 both sides.		
191	Baker Accts Rec	100.00	
192	To General Expenses	100.00	
193	To Individuals to Co.	100.00	
	Transferring from Baker Accts Rec Ledger an amount charged to Baker Extra Expenses during the month of February 1901.		
194	Postage N.Y.	100.00	
195	Baker Sub. Exp.	100.00	
196	Baker Accts Rec	100.00	
197	Baker Extra Expenses	100.00	
198	To Individuals to Co.	100.00	
199	To Individuals to Co.	100.00	
	Transferring item of Betty Accts payment to Washington Mfg Co to from St. Geo. Ledger to Baker Accts Rec Ledger		
200	Baker Accts Rec	100.00	
201	Washington Mfg Co	100.00	
202	Washington Mfg Co	100.00	

Orange N.J. February 1901

Sales

To Individuals &amp; Co.

7% Comm on amount of Sales during  
the month of February 1901 on Baker  
& Co's on Merchandise and Baker  
Merchandise

Baker Accts Rec 1105.00

Baker Merchandise 1105.00

J. W. Hadstone 1105.00

To Individuals &amp; Co.

To Individuals &amp; Co.

To write off sundry accounts to Baker  
Lumpsum, same being uncollectible  
as follows - see attached papers

Baker Accts Rec 106.43

Baker Lumpsum 106.43

Baker Accts Rec 106.43

Fisher Printing Co 73.00

S. Farnham 50.00

Dainger 7.00

W. B. Rogers 2.00

J. B. Rouse 12.00

Wm. S. S. S. S. S. 10.00

Chas. H. Hardy, B. S. & Co 24.00

Am. Wood Working Mach Co 17.00

Profit &amp; Loss

To Individuals &amp; Co.

To transfer from Baker Lumpsum  
and in Baker Accts Rec'd as to  
Profit & Loss Acct, General Ledger the  
balance as of this date, this amount  
being uncollectible

Baker Accts Rec 144.11

Baker Lumpsum 144.11

Orange N.J. February 1901

To Individuals &amp; Co.

To Individuals &amp; Co.

To write off sundry debit & credit bal-  
ances appearing on the following ac-  
cts in the Baker Accts Rec Ledger Feb  
28, 1901 - instructions of Mr. S. S.  
more than being attached

Baker Accts Rec 703

Baker Lumpsum 703

Baker Accts Rec 703

F. S. S. S. S. 703

W. B. S. S. S. 703

W. B. S. S. S. 703

J. S. S. S. S. 703

W. B. S. S. S. 703

W. B. S. S. S. 703

W. B. S. S. S. 703

W. B. S. S. S. 703

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W. B. S. S. S. 703

W. B. S. S. S. 703

W. B. S. S. S. 703

W. B. S. S. S. 703

W. B. S. S. S. 703

W. B. S. S. S. 703

Orange N.J. February 28, 1901

Profit Loss	To Suspense	3525	
Transferring balance appearing on Suspense Acct to Profit Loss Acct.			3525
Machinery Tools	To Manufacturing	72796	
To correct error in distribution of Shop Order No. 39, distribution being this cellars should have been Machinery Tools.			72796
Other cellars		72796	
Manufacturing	To Individuals & Co.	02	
Error entering amount of bill 12977 in Abstract of Sales			02
Entered on 12.29			
Should be 12.29			
Photograph	National Photo Co.	02	
Individuals & Co.	To Individuals & Co.	2250	
Transfer of acct			2250
of National Photo Co.		2450	
Bond Interest	To Unpaid Bond Interest	92500	
Amount due on Coupon Series No. 7 but unclaimed and unpaid Feb. 28, 1901, and not paid to demand			92500
Amount Series Paid		70000	
		67500	

Orange N.J. February 28, 1901

Summaries	To Individuals & Co.	379497	
Amount of disbursements during the month of February, 1901 as recorded in Register of disbursements folio 211 b			379497
218 both sides.			
General Expense		1020395	
Machinery Tools		60059	
Manufacturing		20000	
Manufacturing		2066367	
Other		2757	
Individuals & Co.		3060	
Summaries	To Manufacturing	90256	
Amount of Material, Expenses and Box Factory transfers during February, 1901 as recorded in Register of disbursements folio 219 p. 218			90256
General Expense		44700	
Machinery Tools		7198	
Manufacturing		55000	
Manufacturing	To Manufacturing	112	
To correct error in distribution of Voucher 12932 distributed to Special Shop Order should have been to			112
Manufacturing			
Special Shop Order		614	
Manufacturing	To Manufacturing	99605	
To transfer from Special Shop Order Acct amount of Material to Material Sales, and amount of Labor to Material Sales Acct			99605
Material Sales		19584	
Other		50001	
Special Shop Order		99605	



Orange N.J. February 1901

176	Manufacturing	28	5774.46
176	To Manufacturing		5774.46
	To distribute pro rata balance		
	existing in Manufacturing Acct		
177	Manufacturing	5774.46	
178	Photograph	2122.56	5145.55
179	Miscellaneous	1176.65	300.00
180	Spring Motor	1100.00	246.12
181	Tan Motor	420.00	104.50
182	Proj. Sinter	509.15	129.60

183	Individuals & Co.	28	29564.01
183	To Sales		29564.01
	To charge National Photographic Co. with		
	an amount to cover additional profit		
	to which we are entitled on Photographic		
	and Wax accounts as indicated below		
184	National Photographic Co	29564.01	
2	Photograph	44149.24	
7	Wax	16213.03	
	Individuals & Co.	16213.03	
	Photograph	557.75	62412.76
	Wax	175.67	101702.01
	Profit as shown on Order	Wax %	57516.00
	Photograph %	2487.69	50032.11
		39448.69	

176	Manufacturing	28	16213.03
176	To General Expense		16213.03
	To distribute pro rata General Expense & Appreciation		
	over following accounts.		
5	Photograph	17733.38	
27	Pat. Lito & L.D. Machines	8403.15	
143	Wax	44634.44	
125	Miscellaneous	5729.77	
100	Spring Motor	5049.87	
106	Tan Motor	1782.14	
127	Proj. Sinter	2175.62	
130	Cabinet	7211.84	

Orange N.J. February 1901

73	General Expense	28	19603.74
64	To General Expense		19603.74
	5% of Labor & Material during fiscal year		
	ending July 28-1901		
	5% of 592,074.16		
152	Sales	28	542956.55
176	To Manufacturing		542956.55
	To transfer cost of Sales of the following		
	accounts for fiscal year ending July 28-1901		
2	Photograph	290,990.21	
13	Pat. Lito & L.D. Machines	39,039.31	
65	Merchandise	1,442.16	
7	Wax	141,742.01	
26	Miscellaneous	17,546.57	
43	Spring Motor	17,893.41	
105	Tan Motor	8,621.24	
37	Proj. Sinter	7,227.05	
55	Prod. Material Sales	1,392.45	
69	Cabinet	17,061.59	
5	Photograph	290,990.21	
27	Pat. Lito & L.D. Machs	39,039.31	
116	Merchandise	1,442.16	
143	Wax	141,742.01	
125	Miscellaneous	17,546.57	
100	Spring Motor	17,893.41	
106	Tan Motor	8,621.24	
127	Proj. Sinter	7,227.05	
104	Prod. Material Sales	1,392.45	
130	Cabinet	17,061.59	

8	Profit & Loss	28	43856.60
	To Sundries		
	To write off the following accounts		
125	Prod. Interest	15000.00	
165	Dividend	24566.60	
		28566.60	

Orange N.J. February 1901

Sales		28
1	To Capital and Loss	
For profits realized on the following accounts during fiscal year ending Feb'y 28-1901:		
2	Phonographs	43,661.55
13	Pathe Cuts & L.L. Machines	11,533.12
65	Pathe Merchandise	923.10
7	Wax	21,261.31
26	Miscellaneous	1,250.25
43	Spring Motor	898.62
125	Pathe Motor	547.80
37	Projecting Cinemascope	1500.63
55	Raw Material Sales	745.97
69	Adverts	9462.12

66263.17

66263.17



Orange N.J. March 1901

162	Individuals <sup>to</sup> Co	2000.00	
151	To Notes Payable		2000.00
	Given David Insull, our honor note dated this date bearing interest @ 5% per annum and payable at German National Bank New York N.Y.	2000.00	
1	Samuel Insull		
162	Individuals <sup>to</sup> Co	30	
162	To Individuals <sup>to</sup> Co		30
	Transferring from P. Co Ledger into Bates Accts Receivable Ledger Stewart & Co. Mar 7, 1901		
6	Stewart & Co	30	
43	Bates Accts Rec	30	
23	Stewart & Co	30	
162	Individuals <sup>to</sup> Co	159	
162	To Individuals <sup>to</sup> Co		159
	To credit in the Bates Accts Rec Ledger to Stewart & Co. amount of their invoice No. against National Phonos Co		
749	National Phonos Co	159	
43	Bates Accts Rec	159	
73	Stewart & Co	159	
121	Notes Payable	3500.00	
162	To Individuals <sup>to</sup> Co		3500.00
	Received from T.A. Edison, (which was this day cancelled) our acceptance dated Feb. 28 at 30 days, payable at German National Bank New York N.Y.	3500.00	
15	Thos A Edison		
162	Individuals <sup>to</sup> Co	3500.00	
121	To Notes Payable		3500.00
	Accepted this day draft at our month making it payable at German National Bank New York N.Y. Bal of salary to Apr.	3500.00	
16	Thos A Edison		

Orange N.J. March 1901

73	General Expense	3.0	
162	To Individuals <sup>to</sup> Co		41.99
	Amount of Bates Interest & Discount allowed in settlement of accounts during month of March 1901 as recorded in Cash Book 41.99	41.99	
43	Bates Accts Rec	41.99	
162	Individuals <sup>to</sup> Co	150.00	
162	To Individuals <sup>to</sup> Co		150.00
	Transferring amount of balance from P. Co Ledger to Bates Accts Rec Ledger		
105	Bookkeeper Publishing Co Ltd	150.00	
43	Bates Accts Rec	150.00	
5	Bookkeeper Publy Co Ltd	150.00	
73	General Expense	3.0	
162	To Individuals <sup>to</sup> Co		1000.00
	Salary for month of March 1901		
15	Thos A Edison	1000.00	
162	Individuals <sup>to</sup> Co	6.50	
	To General Expense		6.50
	Amount of Interest & Discount deducted in settlement of accounts during month of March 1901 as recorded in Cash Book folios 142 to 147 both inclusive		
73	General Expense	3.0	
162	To Individuals <sup>to</sup> Co		100.00
	Amount of Bates Extra Expense for month of March 1901		
43	Bates Accts Rec	100.00	
72	Bates Extra Expense	100.00	
162	Individuals <sup>to</sup> Co	6.00	
162	To Individuals <sup>to</sup> Co		6.00
	Transfer to correct error in posting bill 2961. Mar 1901		
43	Bates Accts Rec	6.00	
3	Shea Smith & Co	6.00	
43	Bates Accts Rec	6.00	
4	During March Sep Co 6.00		

Orange N.J. March 1, 90

	<u>Surpluses</u>	30	
162	To Individuals & Co.		33662.72
	Amount of Disbursements for month of March, 1901 as recorded in Register of Disbursements folios 219 to 246 both inclusive		
73	General Expenses		11213.63
24	Machinery & Tools		554.59
81	Furniture & Fixtures		50.00
176	Manufacturing		21631.59
153	Sales		75
162	Individuals & Co.		1215
	<u>Surpluses</u>	30	
76	To Manufacturing		5460.29
	Amount of Material Transfers. Art. Factory & Japanning during month of March, 1901 as recorded in Register of Disbursements folios 223 & 224.		
73	General Expenses		1661.30
24	Machinery & Tools		74.80
76	Manufacturing		3724.19
	<u>Surpluses</u>	30	
162	Individuals & Co.		43679.90
	<u>Surpluses</u>		
	Amount of Sales during month of March, 1901 as recorded in Abstract Sales folios 139 to 143 both inclusive		
73	General Expenses		26369
153	Sales		43416.21
	<u>Surpluses</u>	30	
153	Sales		10312
162	To Individuals & Co.		10312
	2% Commission on amount of Sales of Bate & Edison Machines during month of March, 1901, also Bate Merchandise for same period.		
153	Auto Numbering Mch. 4979.41	2%	99.59
66	Bate Merchandise		176.54
101			3043
	J. H. Bladston	5155.91	10312

Orange N.J. April 1901

163	Individuals <sup>44</sup> Co	
163	9. Individuals <sup>44</sup> Co	24.00
	Transferring from Individuals <sup>44</sup> Companies Ledger to Bates Accts Rec Ledger amount of Invoices Dec 7-1901. 9.00 July 11. 1901. 15.00	24.00
5	Water Pumping Machine Co.	24.00
44	Bates Accts Rec	
✓	Water Pumping Mach Co	24.00
	10	
163	Individuals <sup>44</sup> Co	
163	9. Individuals <sup>44</sup> Co	2.16
	Transferring from S. Co. Ledger into Bates Accts Rec Ledger amount of Invoices Mar 19 1.25 Mar 23 .51 Mar 26 .50	
6	Stewart <sup>44</sup> Co	2.16
44	Bates Accts Rec	2.16
74	Stewart <sup>44</sup> Co	2.16
	12	
163	Individuals <sup>44</sup> Co	
163	9. Individuals <sup>44</sup> Co	4.44
219	Transfer to balance acct of J. J. Monck Edison Mfg Co	4.44
44	Bates Accts Rec	4.44
181	J. J. Monck	4.44
	17	
163	Individuals <sup>44</sup> Co	
171	To Notes Payable	33.57.16
	Accepted 30 days draft of Amer Oil & Supply Co dated this day and made same payable at German National Bank New York NY	33.57.16
5	American Oil & Supply Co	33.57.16
	17	
163	Individuals <sup>44</sup> Co	
171	To Notes Payable	58.0.13
	Accepted this day draft of Chas M. Heid & payable June 26-1901 at German National Bank New York NY	58.0.13
3	Chas M. Heid	58.0.13

Orange N.J. April 1901.

167	Individuals $\frac{1}{2}$ Co	19	
167	To Individuals $\frac{1}{2}$ Co		
167	Transferring from Dr Co Ledger into Bats		
167	Accts Rec follow amount of April 1901		
167	N.A. Force & Co	35.00	
167	Bats Accts Rec	35.00	
167	N.A. Force & Co	35.00	
167	Individuals $\frac{1}{2}$ Co	30	
167	To Individuals $\frac{1}{2}$ Co		
167	Transferring amount of April Vouchers		
167	from Dr Co Ledger into Bats Accts Rec		
167	Ledger		
167	Boof Harper Publishing Co	35.00	
167	Bats Accts Rec	35.00	
167	Boof Harper Publishing Co	35.00	
167	Individuals $\frac{1}{2}$ Co	30	
167	To Individuals $\frac{1}{2}$ Co		
167	Transferring from Bats Accts Rec Ledger		
167	amount of Bats Extra Expenses for the		
167	month of April 1901 into		
167	General Ledger acct		
167	Bats Accts Rec	100.00	
167	Bats Extra Expenses	100.00	
167	Individuals $\frac{1}{2}$ Co	30	
167	To Individuals $\frac{1}{2}$ Co		
167	Salary for month of April 1901		
167	J. Q. Gibson	100.00	
167	Individuals $\frac{1}{2}$ Co	30	
167	To Individuals $\frac{1}{2}$ Co		
167	To take out of Profit $\frac{1}{2}$ Loss amount of		
167	his J. G. Johnson & Co charged to suspense		
167	Bats Accts Rec	.05	
167	J. G. Johnson & Co	.05	
167	Bats Accts Rec	.05	
167	Bats Suspense	.05	

35.00

35.00

100.00

100.00

.05

Orange N.J. April 1901.

73	General Expense	30	
167	To Individuals $\frac{1}{2}$ Co		
167	Amount of Bats Interest & Discount		
167	allowed in settlement of accounts for		
167	month of April 1901 as recorded in		
167	Cash Book & folios 1 to 5 inclusive		
167	A Discount	57.75	
167	Bats Accts Rec	57.75	
73	General Expense	30	
167	To Individuals $\frac{1}{2}$ Co		
167	Amount of Cash Discount deducted		
167	in settlement of accounts during month		
167	of April 1901 as recorded in Cash Book		
167	& folios 1 to 5 both inclusive		
167	Individuals $\frac{1}{2}$ Co	30	
167	To Sundries		
167	Amount of Sales for month of April		
167	1901 as recorded in Abstract of Sales folios		
167	144 to 148 both inclusive to be credited		
167	as follows		
167	General Expense		
167	Sales		
167	Manufacturing	30	
167	Individuals $\frac{1}{2}$ Co		
167	To Individuals $\frac{1}{2}$ Co		
167	Transfer to correct error in posting bill		
167	312.01 Apr 22-1901		
167	Bats Accts Rec	60.00	
167	W. H. Barnard Wilmington N.C.	60.00	
167	Bats Accts Rec	60.00	
167	W. H. Barnard Hartford Ct	60.00	

57.75

57.75

506

506

39,170.35

1964.3

39,271.11

2.11

600

600

Orange, N.J. April 1901

153	Sales	36	118.43
163	To Individuals & Cos		118.43
	2% Commission on amount of Sales of Bates & Edison Numbering Machines and Bates Merchandise during month of April 1901 as recorded in Abstract Sales		
14	Bates Auto & LEO Machine	5871.38	2% 118.43
166	Bates Merchandise	250.22	2% 5.00
101	J.W. Gladstone		118.43
163	Individuals & Cos	30	6.30
163	To Individuals & Cos		8.30
	Transferring from Dr Co Ledger into Bates Accts Rec Ledger the following invoiced from Dr Acct 736.50 1/4 12 3/4 3.00		
102	Dr Acct	8.30	
416	Bates Accts Rec	8.30	
1	Dr Acct	8.30	
163	Individuals & Cos	30	16.00
163	To Individuals & Cos		16.00
	Transferring from Bates Accts Rec Ledger into Dr Co Ledger the above amount debit the Mobile Co of America as we have placed the account in the hands of The Associated Merchants of N.J. for collection		
201	Associated Merchants of N.J.	16.00	
416	Bates Accts Rec	16.00	
209	Mobile Co of America	16.00	
		30	

	Sundries		
73	To Manufacturing		1143.71
	Amount of Material Transfer during month of April 1901 as recorded in Register of Disbursements folio 231 chargeable to		
73	General Expense		2096.95
24	Machinery & Tools		174.22
176	Manufacturing		9022.81

Orange, N.J. April 1901

	Sundries	30	
163	To Individuals & Cos		58560.52
	Amount of Services rendered during month of April 1901 as recorded in Register of Disbursements folios 225 to 231 both inclusive chargeable to		
73	General Expense		1445.16
24	Machinery & Tools		654.96
176	Manufacturing		51377.05
153	Sales		240.
163	Individuals & Companies		4715
163	Individuals & Cos	30	506.
73	To General Expense		506.
	To cancel Journal entry of this date see folio 21 same being in error		
163	Individuals & Cos	30	506.
73	To General Expense		506.
	Amount of Cash Disbursements deducted in settlement of accounts during month of April 1901 as recorded in Cash Book 25 folios 1 to 5 both inclusive		

Orange NJ May 1901

163	Individuals & Cos	13	
163	To Individuals & Cos		
	Transferring Cash received from Neil Beach Apr 26-1901 to account of Schaff & O'Connor as they deduct this amount in settlement made this day		
14	Bates Accts Rec	6.75	
217	Neil Beach	6.75	
14	Bates Accts Rec	6.75	
6	Schaff & O'Connor Co	6.75	
		31	
73	General Expenses		
163	To Individuals & Cos		
	Amount of Bates Extra Expense for month of May 1901		
14	Bates Accts Rec	125.00	
73	Bates Extra Expense	125.00	
		31	
163	Individuals & Cos		
163	To Individuals & Cos		
	Transferring from Tr Co Ledger into Bates Accts Rec Ledger amount of Invoice Apr 24-1901		
100	New A Force & Co	18.00	
14	Bates Accts Rec	18.00	
1	W. A. Force & Co	18.00	
		31	
163	Individuals & Cos		
163	To Individuals & Cos		
	Transferring from Bates Accts Rec Ledger into Tr Co Ledger the amount of H.B. Bennett Co account placed in hands of attorney for collection		
202	Associated Merchants of N.Y.	100.00	
14	Bates Accts Rec	100.00	
210	H.B. Bennett Co	100.00	

675

125.00

18.00

100.00

100.00

Orange NJ May 1901

163	Individuals & Cos	131	
163	To Individuals & Cos		
	Transferring from Bates Accts Rec Ledger into Tr Co Ledger amount of Cash received in settlement of accounts of Mobil Co of America & H.B. Bennett Co		
14	Bates Accts Rec	23.55	
210	Associated Merchants of N.Y.	23.55	
202	Associated Merchants of N.Y.	23.55	
		31	
163	Individuals & Cos		
163	To Individuals & Cos		
	Transfer to correct error in posting bill 307.00 March 25-1901		
14	Bates Accts Rec	64	
209	Abt & May	64	
14	Bates Accts Rec	64	
209	American Ice Co	64	
		31	
163	Individuals & Cos		
163	To Notes Payable		
	Give this day our Note payable four months after date to German National Bank Newark bearing interest @ 6%		
1	Samuel Insull	3000.00	
		31	
163	Individuals & Cos		
163	To Notes Payable		
	Have our Note dated this day payable (4) four months after date to German National Bank Newark 719 Interest added @ 6%		
71	Bridgeport Brass Co	1224.00	
		31	
163	Individuals & Cos		
163	To Notes Payable		
	Give our Note dated this day payable (4) four months after date to German Nat Bank Newark 719 Interest added @ 6% in settlement of Apr. 1st full to April 1901		
71	Bridgeport Brass Co	1128.06	

23.55

23.55

64

64

3000.00

3000.00

1224.00

1224.00

1128.06

1128.06

Orange N.J. May 1901

163	Individuals & Cos.	3033.57	
125	To Notes Payable	3033.57	
	Draw our Note dated this day payable (4) four months after date at German National Bank Newark N.J. Interest added @ 6% In settlement of account in full to May 1-1901		
202	Columbia Steam Boiler Co.	3033.57	
163	Individuals & Cos.	28.75	
163	To Individuals & Cos.	28.75	
	Transferring the amount of Cash received Apr 32-1901 from Fidelity & Casualty Co. to account of Sam Reed		
201	Fidelity & Casualty Co.	28.75	
201	Sam Reed	28.75	
73	General Expense	1000.00	
163	To Individuals & Cos.	1000.00	
16	Salary for month of May 1901	1000.00	
16	Thos A Edison	1000.00	
163	Individuals & Cos.	65726.34	
	To Sundries		
	Amount of Sales for month of May 1901 as recorded in Abstract of Sales plus 159 to 153 both inclusive to be credited to		
73	General Expense	220.11	
153	Sales	65505.19	
76	Manufacturing	25	
153	Sales	12533	
163	To Individuals & Cos.	12533	
	2 1/2 Commission on amount of Sales of Auto & Pump Mchs & Pate Mchs during month of May 1901 as recorded in Abstract of Sales		
66	Pate Mchrs	43714.07	8.75
14	Auto & Pump Machinery	57224.2	116.57
101	J. H. Gladstone	12533	

Orange N.J. May 1901

73	General Expense	53.57	
163	To Individuals & Cos.	53.57	
	Amount of Pate Interest & Discount allowed in settlement of accounts during the month of May 1901 as recorded in Cash Book 5 folios 6 to 11 inclusive		
44	Pate's debt Rec	53.57	
163	Individuals & Cos.	242	
73	To General Expense	242	
	Amount of Cash which deducted in settlement of accounts during month of May 1901 as recorded in Cash Book 5 folios 6 to 11 both inclusive		
	Sundries		
163	To Individuals & Cos.	65501.32	
	Amount of Invoices vouchered during month of May 1901 as recorded in Register of Disbursements folios 238 to 239 both inclusive chargeable to		
73	General Expense	9805.49	
24	Machinery & Tools	4534.27	
51	Guarantee & Franchise	11.13	
76	Manufacturing	49189.07	
153	Sales	671	
153	Individuals & Companies	33.85	
	Sundries		
76	To Manufacturing	12505.34	
	Amount of Material Transferred for month of May 1901 as recorded in Register of Disbursements folio 239 chargeable to		
73	General Expense	2288.75	
24	Machinery & Tools	29.91	
76	Manufacturing	10266.61	

Orange, N.J. June 1901

163	Individuals & Co.	1.0	
163	To Individuals & Co.		
Received this day accepted Draft payable at three days sight at Merchants National Bank, New Haven Conn. on settlement of account in full to Apr. 30, 1901. Interest added			
161	Bates Accts Rec	13.56	
144	Bates Accts Rec	13.56	
100	Valentine Stamp Co	13.56	
163	Individuals & Co.	1.0	
74	To General Expense		
Interest added to Accepted Draft of even date payable 30 days sight			
144	Bates Accts Rec	.20	
100	Valentine Stamp Co	.20	
56	Notes Receivable	1.0	
163	To Individuals & Co.		
Received this day 2 month note payable to German National Bank, Newark, N.J.			
700	National Phone Co	5500.00	
163	Individuals & Co.	1.0	
163	To Individuals & Co.		
Transferring Credit Bill 512.90 190-1901 to account of NYC NRRRC. The same being applied on settlement of account this day			
144	Bates Accts Rec	2.50	
201	A. C. Lindsay	2.50	
144	Bates Accts Rec	2.50	
3	NYC & NRRRC	2.50	
56	Notes Receivable	1.9	
163	To Individuals & Co.		
Received this day Note payable Oct. 19, 1901 to German National Bank, Newark, N.J.			
700	National Phone Co	5500.00	

Orange, N.J. June 1901

163	Individuals & Co.	3.0	
163	To Individuals & Co.		
Transferring Cash received June 1901 & credited to W.B. Mummy to account of N.T. Lansing			
144	Bates Accts Rec	12.0	
214	W.B. Mummy	12.0	
144	Bates Accts Rec	12.0	
1	N.T. Lansing	12.0	
163	Individuals & Co.	3.0	
163	To Individuals & Co.		
To take out of Suspense amount written off Feb. 1901 same applying on settlement of our bill May 3-1901			
144	Bates Accts Rec	.07	
3	Bates Suspense	.07	
144	Bates Accts Rec	.07	
103	Consolidated Stamp & Print Co	.07	
163	Individuals & Co.	3.0	
73	To General Expense		
To correct error in transcribing P.M. 1901 from copy book into Register of Disbursements entered as 14.08 should be 54.08			
700	National Phone Co	50.00	
163	Individuals & Co.	3.0	
176	To Manufacturing		
To correct error in recording P.M. 1901 in Register of Disbursements for May 1901 entered as 17.46 should be 4.00			
700	Edison Mfg. Co	13.46	
133	Box Factory	13.46	

Orange N.J. June 1901

153	Sales	30	
153	To Sales		
	To correct error in distributing amount of bill 20367 May 6-1901		
	Credited to Photograph		
	Should be Paid		
2	Photograph	1312.42	
8	Wage	1312.42	
		30	
163	Individuals & Co.		
163	To Individuals & Co.		
	Transferring into Dr Co's Ledger from Bates Acct Rec Ledger the following bills		
	May 8 31450 1.37		
	12 31039 4.20		
	22 31679 1.74		
5	Metter Numbering Mch Co	46.32	
44	Bates Acct Rec	46.32	
2	Metter Numbering Mch Co	46.32	
		30	
163	Individuals & Co.		
163	To Individuals & Co.		
	Transferring Co. b/p. 2986 31-1901 from Bates Acct Rec Ledger into Dr Co's Ledger		
44	Bates Acct Rec	1.00	
3	Shea Smith & Co.	1.00	
4	Shea Smith & Co.	1.00	
		30	
163	Individuals & Co.		
163	To Individuals & Co.		
	Transferring into Bates Acct Rec Ledger from Dr Co's Ledger the following accounts:		
	Brookrupen Bldg Co. Dr 7/7 150.00		
	J.D. Burch 7.20 3.5		
	Stewart & Co. 7/7 4.57 1.44		
105	Brookrupen Bldg Co.	150.00	
12	J.D. Burch	3.5	
6	Stewart & Co.	4.57	
42	Bates Acct Rec	2022	
1	Brookrupen Bldg Co.	150.00	
7	J.D. Burch	3.5	
42	Stewart & Co.	4.57	

1312.42

1312.42

46.32

46.32

1.00

1.00

2022

2022

Orange N.J. June 1901

73	General Expense	30	
163	To Individuals & Co.		
	Transferring amount of Bates Extra Expense for month of June 1901 from Bates Acct Rec Ledger into Dr Co's Ledger		
44	Bates Acct Rec	100.00	
72	Bates Extra Expense	100.00	
		30	
73	General Expense		
163	To Individuals & Co.		
	Salary for current month		
71	Thos. A. Edison	1000.00	
		30	
163	Individuals & Co.		
163	To Individuals & Co.		
	Transferring Cash received from Strocker Drug Co. May 27-1901 from Bates Acct Rec Ledger into Dr Co's Ledger as the amount belonged to Edison. N.J. Co. as it was transferred to them through Bates Cash		
44	Bates Acct Rec	16	
21	Strocker Drug Co.	16	
206	Strocker Drug Co.	16	
		30	
163	Individuals & Co.		
	To Sundries		
	Amount of Sales for month of June 1901 as recorded in Abstract of Sales files 155 to 159 both inclusive to be credited as follows		
73	General Expense		
153	Sales		
176	Manufacturing		
		30	
153	Sales		
163	To Individuals & Co.		
	21/ Commission on amount of Sales of Auto Numbering Machines - Bates Order for month of June 1901 recorded in Abstract of Sales		
	Auto Number Mchs. 6573.52 21 131.67		
46	Bates Mchs	103.72	
101	J.W. Gladstone	133.74	

100.00

100.00

1000.00

1000.00

16

16

46672.01

161.12

40729.95

94

133.74

133.74



Orange N.J. June 1901

30		
73	General Expense	27.44
163	To Individuals & Cos.	27.44
Amount of Bates Interest & Discount allowed in settlement of accounts for June 1901 as recorded in Cash Book 5 folio 16		
41	Bates Accts Rec	27.44
30		
163	Individuals & Cos.	
73	To General Expense	72
Amount of Cash Discount deducted in settlement of accounts for June 1901 as recorded in Cash Book 5 folio 16		
17		
163	Individuals & Cos.	1020.00
122	To Note Payable	1020.00
Paid this day our 6 months Note Payable Oct 17 - 1901 at Roman National Bank New York in payment on account Interest added		
102	Q. Weston & Son	1020.00
30		
Sundries		
163	To Individuals & Cos.	4309.145
Amount of invoice vouchers for month of June 1901 as recorded in Register of Disbursements folios 241 to 247 both inclusive chargeable to		
74	General Expense	1260.231
24	Machinery & Tools	4153
31	Furniture & Fixtures	4037
26	Real Estate & Buildings	1450
76	Manufacturing	30346.38
163	Salaries	1436
163	Individuals & Companies	5180

Orange N.J. June 1901

30		
Sundries		
76	To Manufacturing	1730.43
Amount of Material Transfer for month of June 1901 as recorded in Register of Disbursements folio 247 chargeable to		
74	General Expense	1820.21
24	Machinery & Tools	261
76	Manufacturing	6907.61

Orange N.J. July 1901

## 163 Individuals &amp; Co.

## To Note Payable

122 Have this day our Note payable No 1-1911  
at German National Bank Newark N.J.  
in settlement of Invs No 1-96.

Interest added @ 6%

1 Culling &amp; Crane 1255.73

## 163 Individuals &amp; Co.

## To Note Payable

122 Have this day our Note payable No 50911  
at German National Bank Newark N.J.  
in settlement of account in full to W-1911  
Interest added at 6%

101 Centies Tool &amp; Supply Co 588.54

## 163 Individuals &amp; Co.

## To Note Payable

Note dated July 1st payable Oct 1. 2069.17

Oct 23 2072.90

at German National Bank Newark N.J.

In settlement of account in full to May 1st

Interest added from June 1st 1901 @ 6%

102 U Weston &amp; Son 41143.07

## 163 Individuals &amp; Co.

## To Note Payable

122 Have this day our Note as follows in  
settlement of April account in full

Invs Note 1223.50

" " 1226.00

Payable @ German National Bank Newark N.J.

Interest added at 6%

1 Bridgeport Brass Co 5544.50

Orange N.J. July 1901

## 163 Individuals &amp; Co.

## To Individuals &amp; Co.

163 Transferring Inv No 1911 Stewart & Co  
from National Phonograph Co Books  
to Bates Acct Rec Ledger same having  
been deducted in settlement July 11, 1901

710 National Phon Co 157

414 Bates Acct Rec 157

716 Stewart &amp; Co 157

## 163 Individuals &amp; Co.

## To Individuals &amp; Co.

163 Transferring from S & Co Ledger into  
Bates Acct Rec Ledger the following items

105 Prof keeper Aubly Co Inv 9.9 15.00

6 Stewart &amp; Co " 414-15 95-10 26

414 Bates Acct Rec 15.26

8 Prof keeper Aubly Co 15.00

716 Stewart &amp; Co 26

## 716 General Expenses

## 163 To Individuals &amp; Co.

To allow \$1. Cash Direct from bills No 1911  
& 1912 76.50 Total 24.69

24 Not previously deducted Total 49

414 Bates Acct Rec 49

101 Geo N Hewitt 47

114 Individuals &amp; Co.

## 163 To Individuals &amp; Co.

To transfer Cash credited to M Backrach  
Don to account of JFW German Co  
sum of Bankers Advice of Collection

114 Bates Acct Rec 10.67

107 M Backrach &amp; Son 10.67

414 Bates Acct Rec 10.67

100 JFW German Co 10.67

Orange N.J. July 1901

74	General Expense	31	100.00	
163	To Individuals & Co			100.00
	Amount of Sales Extra Expense for month of July 1901 transferred to General Ledger from Sales Root's Ledger			
14	Sales Extra Exp	100.00		
72	Sales Extra Expense	100.00		
74	General Expense	31	47.32	
163	To Individuals & Co			47.32
	Amount of Sales Interest & Discount allowed in settlement of accounts during month of July 1901 as recorded in Cash Book & Sales 17.63 32 both inclusive			
14	Sales Root's Acc	47.32		
74	General Expense	31	1000.00	
163	To Individuals & Co			1000.00
11	Salary for month of July 1901	1000.00		
11	W. A. Grier	1000.00		
163	To Individuals & Co	31	4202.36	
	To Sundries			
	Amount of Sales for month of July 1901 as recorded in Sales Root's Sales 41.15 165 both inclusive to be credited as follows			
74	General Expense			
153	Sales		119.39	
176	Manufacturing		41.89 21	
			2.76	
153	Sales	31	90.90	
163	To Individuals & Co			90.90
31	Commission on Sales of Auto Mounting Machine			
	13 Sales Made for month of July 1901 as recorded in Abstract of Sales July 16			
14	Auto Mount Mch.	4472.20	24	82.44
	Less 1/2 for 1/2 Auto Mount Mch.	89.20		86
66	Sales Made	116.06	1901	232.46
		4445.06		90.90
61	J. H. Gladstone			90.90

Orange N.J. July 1901

144	Individuals & Co	31	46.00	
164	To Individuals & Co			46.00
	Transferring Accounts Payable Voucher 14623 dated June 24 1901 to account of Geo. Meier & Co. posted in error to account of Geo. Meier & Sons			
5	Geo. Meier & Sons	46.00		
161	Geo. Meier & Co			46.00
164	Individuals & Co	31	247.50	
164	To Individuals & Co			247.50
	Transferring Accounts Payable Voucher 13973 dated May 21 1901 from account of Goodyear Vulcanite Co. to account of Vulcanized Rubber Co. their successors			
162	Goodyear Vulcanite Co.	247.50		
200	Vulcanized Rubber Co.			247.50
		31		
✓	Sundries			
164	To Individuals & Co			4302.37
	Amount of Invoices Vouchered during month of July 1901 as recorded in Register of Disbursements Sales 249 to 255 both inclusive & chargeable to			
74	General Expense			11486.35
24	Machinery & Tools			166.63
31	Furniture & Fixtures			16.19
176	Manufacturing			3139.46
153	Sales			40
164	Individuals & Companies			72.91
		31		
✓	Sundries			
176	To Manufacturing			90.81
	Amount of Materials Transferred for month of July 1901 as recorded in Register of Disbursements Sales 255 chargeable to			
74	General Expense			1490.17
24	Machinery & Tools			47.7
176	Manufacturing			7522.47

Orange, N.J. August 1901

74	General Expense	\$1	1000.00	
161	To Individuals & Co		1000.00	
147	Salary for month of August 1901			
147	Phos of Edison	1000.00		
161	Individuals & Co	\$1	4575.66	
153	To Notes Payable		4575.66	
	Notes issued as follows in settlement of account to July 1st 1901 payable 4 months from date of issue R. German National Bank			
	Note dated Aug 4 payable Dec 8	1115.66		
	" " " 18	1500.00		
	" " " 25	1500.00		
72	Bridgport Chase Co	4115.66		
161	Individuals & Co	\$3	3.00	
150	To Individuals & Co		3.00	
	Transferring amount of Cr 23125 750-1901 to account of Rantier Bank & Trust Co. the same having been deducted in settlement of account this day.			
44	Date Acct Rec	2.00		
214	Cf Weyl	2.00		
44	Date Acct Rec	2.00		
218	Rantier Bank & Trust Co	2.00		
161	Individuals & Co	\$3	15.00	
161	To Individuals & Co		15.00	
	Transferring from V Co Ledger into Date Acct Rec Ledger the amount of \$15 dated July 27, 1901			
100	Boeckhner Publishing Co	15.00		
42	Date Acct Rec	15.00		
8	Boeckhner Publishing Co	15.00		
74	General Expense	\$1	125.00	
161	To Individuals & Co		125.00	
	Transferring amount of Date Extra Expense from Date Acct Rec Ledger into General Ledger			
44	Date Acct Rec	125.00		
74	Date Extra Expense	125.00		

Orange, N.J. August 1901

161	Individuals & Co	\$1	200.1	
161	To Individuals & Co		200.1	
	Transferring balance due from Shattuck & Krenzel to account of Krenzel Mfg Co. their successors			
44	Date Acct Rec	20.01		
101	Krenzel Mfg Co	20.01		
44	Date Acct Rec	20.01		
104	Shattuck & Krenzel	20.01		
161	Individuals & Co	\$1	75	
161	To Individuals & Co		75	
	Transferring amount of Cash returned to R. O. Schenck Mfg Co through Cash from V Co Ledger into Date Acct Rec Ledger to balance account			
44	Date Acct Rec	75		
213	R. O. Schenck Mfg Co	75		
205	R. O. Schenck Mfg Co	75		
161	Individuals & Co	\$1	46352.23	
	To Sundries			
	Amount of Sales for month of August 1901 as recorded in Abstract of Sales folios 167 to 171 both inclusive to be credited to			
74	General Expense		139.61	
153	Sales		46213.17	
153	Sales	\$1	106.19	
161	To Individuals & Co		106.19	
	37. Commission on Sales of Auto Hand Washes & Bats. Made for month of August 1901 as recorded in Abstract of Sales folio 171			
14	Automatic Numbering Machine	507.72	100.00	
66	Date Merchandise	492.28	594	
		5309.71	100.19	
101	J. W. Gladstone	100.19		

Orange N.J. August 1901

150	Sales	31	118827	
153	To Sales		118827	
	To correct distribution of Bill # 21033 dated July 17-1901 which was credited to Special Shop Order in error should be			
	Material Sales 530.00 Misc 958.27			
109	Special Shop Order #265	118827		
56	Material Sales	230.00		
26	Miscellaneous	958.27		
	31			
74	General Expense		3544	
160	To Individuals & Co		2891	
	Amount of Sales Inland Discount allowed in settlement of accounts during month of August 1901 as recorded in Cash Book			
	as folios 23 to 27 both inclusive			
46	Cash Accts Rec	2891		
	31			
160	Individuals & Co		233	
74	To General Expense		233	
	Amount of Cash Discount deducted in settlement of accounts during month of August 1901 as recorded in Cash Book			
	as folios 23 to 27 both inclusive			
	31			
144	Sundries		462558	
	To Individuals & Co			
	Amount of Invoices vouchered during month of August 1901 as recorded in Register of Disbursements folios 257 to 262 both inclusive chargeable to			
74	General Expense	10881.90		
24	Machinery & Tools	1640.17		
31	Furniture & Fixtures	396		
174	Manufacturing	24160.95		
160	Individuals & Companies	6687		

Orange N.J. August 1901

	Sundries	31		
176	To Manufacturing		641714	
	Amount of Material Transfers for month of August 1901 as recorded in Register of Disbursements folio 262 chargeable to			
74	General Expense	2119.41		
24	Machinery & Tools	153		
176	Manufacturing	626113		

Orange N.J. September 1901

164	Individuals & Cos	40022.0	
22	To Notes Payable	4000.00	
	Notes issued this day payable Jan 3-1902 at Common National Bank Newark N.J. reversing Note of 1900 & 1901 2000 each		
1	Sam's Invoice	4000.00	
164	Individuals & Cos	3502.60	
22	To Notes Payable	3502.60	
	Notes issued this day in settlement of account in full to Aug 1st 1901 payable at Common National Bank Newark N.J.		
	Invoice note payable Dec 6-1901	1746.57	
21	" " Jan 6-1902	1756.03	
	Interest added @ 6% from Aug 1 average due date.		
9	G Weston & Son	3502.60	
22	Notes Payable	3033.57	
164	To Individuals & Cos	3033.57	
	Note dated May 24-1901 payable this day at Common National Bank Newark N.J. returned & renewed		
204	Conbrock Steam Boilers Co	3033.57	
164	Individuals & Cos	2000.00	
22	To Notes Payable	2000.00	
	Note dated this day payable Jan 24-1902 at Common National Bank Newark N.J. reversing our Note dated May 24-1901 and interest @ 6% per annum		
204	Conbrock Steam Boilers Co	2000.00	
164	Individuals & Cos	3.0	
164	To Individuals & Cos	3.0	
	Transferring amount of collection charges on our claim vs. E. G. Shriver from S. C. Lee Ledger into Bates Accts Rec. Ledger		
204	Associated Merchants of N.Y.	3.0	
46	Bates Accts Rec.	3.0	
210	Associated Merchants of N.Y.	3.0	

Orange N.J. September 1901

164	Individuals & Cos	10.00	
164	To Individuals & Cos	10.00	
	Transferring from S. C. Lee Ledger into Bates Accts Rec. Ledger amount of Invoice dated Sept 7-1901 same to apply in settlement of our bill 7/12-1901		
204	Southern Industrial News	10.00	
46	Bates Accts Rec.	10.00	
220	Southern Industrial News	10.00	
164	Individuals & Cos	153.46	
164	To Individuals & Cos	153.46	
	Transferring balance due from E. G. Shriver to account of Associated Merchants of N.Y. for collection		
46	Bates Accts Rec.	15.34	
210	Associated Merchants of N.Y.	15.34	
46	Bates Accts Rec.	15.34	
217	E. G. Shriver	15.34	
164	Individuals & Cos	231.2	
164	To Individuals & Cos	231.2	
	Transferring from S. C. Lee Ledger into Bates Accts Rec. Ledger the following items		
104	Boys Paper Publishing Co. New York	15.00	
201	E. G. Shriver	5.62	
101	Library Bureau	2.50	
46	Bates Accts Rec.	231.2	
8	Boys Paper Publishing Co.	15.00	
103	E. G. Shriver	5.62	
2	Library Bureau	2.50	
164	Individuals & Cos	4.0	
164	To Individuals & Cos	4.0	
	Transferring amount returned to Carson on his Acct through Petty Cash Sept 11-1901 from S. C. Lee Ledger into Bates Accts Rec. Ledger		
46	Bates Accts Rec.	4.0	
204	Carson Tour Acct Co.	4.0	
204	Carson Tour Acct Co.	4.0	

Orange N.J. September 1901

74	General Expense	30	2791
161	To Individuals & Cos		
	Amount of Bates interest rediscunt allowed on settlement of account during month of Sept. 1901 as recorded in Cash Book of 15 folios 21 to 33 both inclusive		
74	Bates Accts Rec	2791	
74	General Expense	30	100.00
161	To Individuals & Cos		
	Transferring from Bates Accts Rec Ledger into General Ledger amount of Bates Extra Expense for month of Sept. 1901		
74	Bates Accts Rec	100.00	
74	Bates Extra Expense	100.00	
74	General Expense	30	1000.00
161	To Individuals & Cos		
	Salary for month of September 1901		
74	Thos. Q. Edison	1000.00	
161	To Sundries		
	Amount of Sales for month of September 1901 as recorded in Abstract of Sales folios 172 to 177 both inclusive to be credited to		
74	General Expense		
163	Sales		19331
176	Manufacturing		443923
			100
163	Sales		94.19
164	To Individuals & Cos		
	2 1/2 Commission on Sales of Auto Mumb Machines and Bats. Mde. for month of September 1901 as recorded in Bats. Sales folio 177		
14	Auto Mumb Machines	4512.61	9027
66	Bats. Merchandise	171.21	372
101	J.W. Gladstone	4707.82	94.19

Orange N.J. September 1901

✓	Sundries	30	
161	To Individuals & Cos		
	Amount of Services rendered during month of September 1901 as recorded in Register of Disbursements folios 264 to 269 both inclusive		
	Charged to		
74	General Expense		1924.09
24	Machinery & Tools		38.65
31	Manufactures & Structures		156.5
176	Manufacturing		51426.60
161	Individuals & Companies		
	444.46		
✓	Sundries	30	
176	To Manufacturing		
	Amount of Material Transfers for month of September 1901 as recorded in Register of Disbursements folios 269 charged to		
74	General Expense		1842.09
24	Machinery & Tools		3.45
176	Manufacturing		5100.27

Orange N.J. October 1901

56	Notes Receivable	10	3000.00	
164	To Individuals & Cos		3000.00	
	Note dated this day payable Feb'y 10-1902 to German National Bank Newark N.J. to apply on account			
76	National Phone Co	20	3000.00	
164	Individuals & Cos		3205.56	
172	To Notes Payable		3205.56	
	Note issued this day payable Jan 30-1902 at German National Bank Newark to apply on account Interest added from Nov 4 average due date @ 6% per annum			
9	Q Weston & Son	21	3205.56	
56	Notes Receivable	21	3000.00	
164	To Individuals & Cos		3000.00	
	Note dated this day payable Feb'y 31-1902 to German National Bank Newark N.J. to apply on account			
76	National Phone Co	24	3000.00	
164	Individuals & Cos		3217.97	
172	To Notes Payable		3217.97	
	Note issued this day payable Feb'y 31-1902 to German National Bank Newark N.J. in settlement of account to Oct 1st 1901 Interest added from Nov 4 average due date @ 6% per annum			
9	Q Weston & Son	31	3217.97	
164	Individuals & Cos		1250.00	
164	To Individuals & Cos		1250.00	
	Transferring amount of Invoice dated June 27th 1901 which was included in acct. settlement by Note dated July 15-1901 in error			
76	National Phone Co	125.00		
101	Painter Tool & Supply Co	125.00		

Orange N.J. October 1901

164	Individuals & Cos	31		
164	To Individuals & Cos		14.00	
	To write off amount of Rec'y 1903H. 14.00 Nov 16-1901 the same being uncollectable			
44	Bates Accts Rec	14.00		
3	Bates Expenses	14.00		
44	Bates Accts Rec	14.00		
200	G. H. Taylor	14.00		
164	Individuals & Cos	31		
164	To Individuals & Cos		28.99	
	Transferring from To Cos Ledger into Bates Accts Rec Ledger the following items			
101	Brookkeeper Publishing Co	15.00		
6	Stewart & Co	7.50		
4	Shear Smith & Co	6.50		
44	Bates Accts Rec	28.99		
8	Brookkeeper Pub'g Co	15.00		
76	Stewart & Co	7.50		
3	Shear Smith & Co	6.50		
74	General Expenses	31		
164	To Individuals & Cos		43.27	
	Amount of Bates Interest and Discount allowed in settlement of account four month of October 1901 as recorded in Cash Book & Feb'y 31-1902 both inclusive			
44	Bates Accts Receivable	43.27		
74	General Expenses	31		
164	To Individuals & Cos		100.00	
	Transferring amount of Bates Extra Expenses for month of October 1901 from Bates Accts Rec Ledger into General Ledger			
44	Bates Accts Receivable	100.00		
74	Bates Extra Expenses	100.00		



Orange N.J. October 1901

74	General Expense	31	1000.00	
164	To Individuals & Co.		1000.00	
1/6	Salary for current month			
	Thos. H. Edison	1000.00		
164	Individuals & Co.	12	1177.81	
122	To Note Payable		1177.81	
	Note issued this day payable Jan. 12, 1902			
	at German National Bank Newark N.J.			
	in settlement of account in full to Oct. 1901			
153	H. Hermann & Son	1177.81		
164	Individuals & Co.	31	7091.293	
	To Sundries			
	Amount of Sales for month of October 1901			
	as recorded in Abstract of Sales folio 179			
	to 183 both inclusive to be credited as follows			
74	General Expense		394.31	
153	Sales		7051.872	
153	Sales	31	1042.8	
164	To Individuals & Co.		1042.8	
	2 1/2% Commission on Sales of Auto. Mould Mch.			
	& Bate Mch. for October 1901 as recorded in			
	Abstract Sales folio 183			
14	Auto. Mould Machines	5026.25		
	Less 2 1/2% " 1901	125.66		
	intermittent disbursements	5020.25		
66	Bate Mch.	193.75	5.88	
		5214.31	104.28	
101	J. W. Gladstone	104.28		
	Sundries	31	1435.10	
176	To Manufacturing			
	Amount of Material Transfers for month of			
	October 1901 as recorded in Register of Disbursements			
	folio 212 chargeable to			
74	General Expense		2852.73	
26	Machinery & Tools		161	
176	Manufacturing		11497.12	

Orange N.J. October 1901

	Sundries	31		
164	To Individuals & Co.		67117.65	
	Amount of Invoices vouchers & during			
	month of October 1901 as recorded in Register			
	of Disbursements folios 271 to 278 both inclusive			
	chargeable to			
74	General Expense		13664.52	
26	Machinery & Tools		803.69	
31	Inventory & Furniture		91.56	
44	Real Estate & Buildings		5750.0	
176	Manufacturing		51971.81	
164	Individuals & Companies		920.	

Orange N.J. November 1901

122	Notes Payable		1255.73	
121	To Individuals & Co.		1255.73	
	To Cancel Note dated July 1-1901 payable this day @ German National Bank Newark N.J. same having been received this day.			
	1 Billing "Crane"	1255.73		
121	Individuals "Co."		612.00	
122	To Notes Payable		612.00	
	Note issued this day payable March 1-1902 at German National Bank Newark N.J. Interest added @ 6% per annum.			
	Removal of Note dated July 1-1901.			
	1 Billing "Crane"	612.00		
111	Individuals "Co."		726.70	
122	To Notes Payable		726.70	
	Note issued this day payable Mar 11 1902 at German National Bank Newark N.J. in settlement of Nov 1901-1901.			
	Interest added @ 6% per annum			
	1 John O. Cowker	726.70		
121	Individuals "Co."		5703.91	
122	To Notes Payable		5703.91	
	Two Notes issued this day payable Feb'y 11 & March 11, 1902 respectively @ German National Bank Newark N.J. in settlement of account in full to Oct 1st 1901. Interest added from Nov 1st average due date.			
	3 months Note	1867.41		
	" "	1867.50		
	1 Bridgeport Brass Co	5703.91		
121	Individuals "Co."		934	
121	To Individuals & Co.		934	
	Transferring balance due to account of 27			
	W. Storck for collection			
	44 Bates Accts Rec	934		
	222 Newman H. Storck	934		
	44 Bates Accts Rec	934		
	120 W. E. Rice Co	934		

Orange N.J. November 1901

121	Individuals "Co."		654	
121	To Individuals & Co.		654	
	To write off 70% of balance due on account of W. E. Rice Co. which was placed in hands of W. Watson for collection in accordance with settlement made this day.			
	44 Bates Accts Rec	654		
	3 Bates Suspenses	654		
	44 Bates Accts Rec	654		
	222 Newman H. Storck	654		
	20			
121	Individuals "Co."		69.57	
121	To Individuals & Co.		69.57	
	Transferring from 27 Co. Ledger into Bates Accts Rec Ledger the following items			
	105 Roof Repair Bldg Co	15.55		
	101 Remission Sons	9.35		
	100 W. J. Force & Co	33.90		
	5 J. Langstadter	3.66		
	1 Library Bureau	4.08		
	6 Stewart & Co	1.99		
	200 Town Mfg. Co	24.0		
	44 Bates Accts Rec	69.57		
	8 Roof Repair Bldg Co	15.00		
	101 Remission Sons	9.35		
	1 W. J. Force & Co	33.90		
	101 J. Langstadter	3.66		
	3 Library Bureau	4.08		
	71 Stewart & Co	1.99		
	71 Town Mfg. Co	24.0		
	3.0			
121	Individuals "Co."		520	
121	To Individuals & Co.		520	
	To correct error in posting Bal 527.97 11-1-01.			
	Charge to Commercial Stamp Co. should be			
	Commercial Printing Co			
	44 Bates Accts Rec	520		
	205 Commercial Printing Co	520		
	44 Bates Accts Rec	520		
	105 Commercial Stamp Co	520		

Orange NJ November 1901

30			
150 Dividend	To Individuals & Co.	7221.60	7221.60
For a dividend of 1 <sup>st</sup> per share on all stock of the Company entitled thereto as per resolutions of Board of Directors at a Special Meeting held at Orange NJ on May 7 <sup>th</sup> 1901			
151 Dividend			
151 Thos Q Edison	3072.21 shares	3072.21	✓
100 John F Randolph	10	15.00	✓
100 Mrs Thos Q Edison	50	45.00	✓
101 W E Libmore	5	7.50	✓
1 Samuel Insull	5	7.50	✓
102 Chas Batchelor	248.44	572.66	✓
101 H B Archimedes	250	575.00	✓
100 International Graphophone Co	1430.	2145.00	✓
103 John E Searles	5	7.50	✓
100 J T M Cheney	5	7.50	✓
102 Jas O W Cutting	436.75	655.13	✓
102 Walter Cutting	317	475.58	✓
	4114.40 p 100	7221.60	

Orange NJ November 1901

30			
160 Dividend	To Individuals & Co.	6018.00	6018.00
For a dividend of 1 <sup>st</sup> per share on all stock of the Company entitled thereto paid Aug 1 1901			
161 Dividend			
161 Thos A Edison	3072.21	2599.26	✓
100 John F Randolph	10	12.50	✓
100 Mrs Thos A Edison	50	37.50	✓
101 W E Libmore	5	6.25	✓
1 Samuel Insull	5	6.25	✓
101 H B Archimedes	250	312.50	✓
102 Chas Batchelor	248.44	310.55	✓
100 International Graphophone Co	1430.	177.50	✓
103 John E Searles	5	6.25	✓
100 J T M Cheney	5	6.25	✓
102 Jas O W Cutting	436.75	545.94	✓
102 Walter Cutting	317	396.25	✓
	4114.40 p 100	6018.00	
30			
160 Dividend	To Individuals & Co.	6018.00	6018.00
For a dividend of 1 <sup>st</sup> per share on all stock of the Company entitled thereto as per resolution of the Board of Directors at a Special Meeting held at Orange NJ Nov 1 <sup>st</sup> 1901			
161 Dividend			
161 Thos A Edison	3072.21	2599.26	✓
100 John F Randolph	10	12.50	✓
100 Mrs Thos A Edison	50	37.50	✓
101 W E Libmore	5	6.25	✓
1 Samuel Insull	5	6.25	✓
102 Chas Batchelor	248.44	310.55	✓
101 H B Archimedes	250.00	312.50	✓
100 International Graphophone Co	1430.	177.50	✓
103 John E Searles	5	6.25	✓
100 J T M Cheney	5	6.25	✓
102 Jas O W Cutting	436.75	545.94	✓
102 Walter Cutting	317	396.25	✓
	4114.40 p 100	6018.00	

Orange NJ November 1901

74	General Expense	30	2066	
111	To Individuals & Cos		2066	
	To allow 3% Cash Discount on Net purchases for May, June, July, Aug, Sept, Oct, Nov 1901 not previously deducted			
	Month	Per Cent		
	May	300.79	3%	11.02
	June	395.68	"	7.91
	July	237.41	"	4.69
	Aug	196.90	"	5.90
	Sept	253.25	"	5.97
	Oct	342.28	"	10.25
	Nov	164.10	"	22.81
		1642.41		53.66
74	Bates Accts Rec		338.6	
1	Nett Phone Co. For Dept		30.66	
74	General Expense	30	2072	
111	To Individuals & Cos		2072	
	Amount of Bates Interest & Discount allowed in settlement of accounts during month of Nov. 1901 as recorded in Cash Book & plus \$10.50-45 cent in advance			
74	Bates Accts Rec	20.72		
74	General Expense	30	125.00	
111	To Individuals & Cos		125.00	
	Transferring amount of Bates Extra Expense for month of November 1901 from Bates Accts Rec Ledger into General Ledger			
74	Bates Accts Rec	125.00		
74	Bates Extra Expense	125.00		
74	General Expense	30	1000.00	
111	To Individuals & Cos		1000.00	
	Salary for current month			
74	Phos of Edison	1000.00		

Orange NJ November 1901

74	General Expense	30	2077
111	To Manufacturing	2077	
	To correct distribution of Material Transfer Voucher 1866, dated Oct 5, 1901, the above amount being charged to Raw Material instead of General Expense		
	Month	2077	
	May	252.1	
	Sept	258.1	
	Oct	252.1	
		2077	
74	Or Raw Material	2077	
111	Individuals & Cos	30	14.08
111	To Individuals & Cos	14.08	
	Transferring from Dr. Crs Ledger into Bates Accts Rec Ledger the following items		
201	Tilton Cddy Co.	10	
6	Stewart & Co.	10	
204	Whites Sapping Cddy Co. %	3.96	
74	Bates Accts Rec	14.08	
206	Tilton Cddy Co.	10.00	
74	Stewart & Co.	10	
214	Whites Sapping Cddy Co.	3.96	
111	Individuals & Cos	30	75
111	To Individuals & Cos	75	
	To transfer amount paid by Edison Mfg Co for our account to Eric P.P. Co. in error		
	Bates Freight for Oct voucher through Mfg Co Register of Merchants		
74	Eric P.P. Co.	75	
74	Edison Mfg Co	75	
111	Individuals & Cos	30	310
111	To Individuals & Cos	310	
	To transfer amount of collection charges on account of W.H. Reed from Dr. Crs Ledger into Bates Accts Rec Ledger		
202	Associated Merchants of N.Y.	310	
74	Bates Accts Rec	310	
212	W.H. Reed	310	

Orange NJ November 1901

151	Individuals & Co.	30	66,122.57
	To Sundries		
	Amount of Sales for month of November 1901 as recorded in Abstract of Sales folios 182 to 185 both inclusive to be credited to		
	74 General Expense	20,191.	
	153 Sales	65,920.66	
152	Sales	30	11,194.
151	To Individuals & Co.		111,94.
	2% Commission on Sales of Anti Dump Mache & Sales Made for month of November 1901 as recorded in Abstract Sales folio 188.		
	5 Anti Dumping Machine 537.49 2% 107.75		
66	Rates Merchandise 209.40	41.2	
7	J.W. Gladstone	111.94	
74	General Expense	30	33.75
	To Sundries		
	To correct distribution of bill 3772 16.2		
	& P.M. 1901. 175 credited to General.		
	Expense in error		
176	Manufacturing		17.75
77	Miscellaneous	17.75	
153	Sales		16.00
36	Miscellaneous	16.00	
	Sundries	30	
151	To Individuals & Co.		64,872.85
	Amount of Invoices vouchered during month of November 1901 as recorded in Register of Disbursements folios 210 to 216 both inclusive chargeable to		
	74 General Expense	10,370.42	
	89 Machinery & Tools	484.99	
	176 Manufacturing	51,045.56	
	151 Individuals & Co.	17.40	

Orange NJ November 1901

	Sundries	30	
176	To Manufacturing		15,726.14
	Amount of Material Transfers for month of November 1901 as recorded in Register of Disbursements folios 216 chargeable to		
	74 General Expense	29,806.5	
	89 Machinery & Tools	22	
	176 Manufacturing	12,745.94	



Orange 27 December 1901

161	General Expense	31	502.1
171	To Individuals & Co.		370.21
	Amount of Rate Interest Discount allowed in settlement of account during month of December 1901 as recorded in Cash Book folios 46 to 50 both inclusive		
74	Rate Acc'ts Rec.	50.21	
181	Individuals & Co.	31	63127.67
	To Sundries		
	Amount of Sales for month of December 1901 as recorded in Abstract of Sales folios 159 to 194 both inclusive to be credited as follows		
161	General Expense		93.27
183	Sales		63694.80
171	Machinery & Tools		40.00
176	Manufacturing		10
183	Sales		98.10
181	To Individuals & Co.		98.10
	2% Commission on Sales of Auto Pump Machine & Rate Merchandise for month of Dec 1901 as recorded in Abstract Sales folio 194		
181	Auto Pumping Machine	425.75 at .025	10.64
61	Rate Merchandise	278.25	5.57
		4905.14	98.10
7	J. H. Gladstone	31	98.10
181	Sundries		
	To Individuals & Co.		7971.50
	Amount of services rendered during December 1901 as recorded in Register of Disbursements folios 311 to 324 both inclusive chargeable to		
167	General Expense		1379.74
181	Machinery & Tools		905.26
31	Insurance - Policies		4.08
115	Rate Insurance - Policies		23.00
176	Manufacturing		6050.55
181	Individuals & Companies		401.8

Orange 27 December 1901

Sundries	31	
To Manufacturing		18723.79
	Amount of Material Transfers during month of December 1901 as recorded in Register of Disbursements folios 324 chargeable to	
167	General Expense	5212.40
181	Machinery & Tools	77.59
176	Manufacturing	13533.80

Orange, N.J. January 1902.

## 11 Individuals &amp; Co.

## To Notes Payable

Two Note of \$2000 each payable March 1902  
 & April 1902 respectively at German National  
 Bank Newark N.J. Renewing note due  
 this day bearing interest @ 6% per annum  
 1. Short & Supply Co. 4000.00  
 Note dated March 29 2000.00

## 11 Individuals &amp; Co.

## To Individuals &amp; Co.

Received this day Note payable one month  
 after date at Manhattan National Bank  
 New Haven Conn. in settlement of  
 account to Dec 1-1901. Interest added  
 from Dec 9th @ 6% per annum

44 Bates Acct Rec 27.55

101 Bates Notes Receivable 27.55

44 Bates Acct Rec 27.55

100 Valentine Stamp Co 27.55

## 11 Individuals &amp; Co.

## To General Expense

Interest added to Note received this day from  
 Valentine Stamp Co. payable Feb 9-1902

Account as per Ledger 27.01

Amount of face of Note 27.00

60 day Interest @ 6% .27

44 Bates Acct Rec .27

100 Valentine Stamp Co .27

## 11 Individuals &amp; Co.

## To Notes Payable

Accepted Draft this day payable four months  
 after date at German National Bank Newark  
 N.J. in settlement of acc. account. Interest added  
 from Feb 12th @ 6% per annum

9 Weston &amp; Son 1609.42

Orange, N.J. January 1902.

## 11 Individuals &amp; Co.

## To Notes Payable

Accepted Draft this day payable one month  
 after date at German National Bank Newark  
 N.J. in settlement of account to Jan 1-1902  
 5 American Oil & Supply Co. 902.41

## 11 Individuals &amp; Co.

## To Notes Payable

Accepted Draft this day payable one month  
 after date at German National Bank Newark  
 N.J. in settlement of acc. account less Five  
 1728.551.42 & 1728.551.42 Interest added from  
 Feb 22-1902 @ 6% per annum

9 Weston &amp; Son 1609.42

## 11 Individuals &amp; Co.

## To Individuals &amp; Co.

To Cancel our Note dated Sept 24-1901 same  
 being renewed this day

105 Combrock Steam Boiler Co 2000.00

## 11 Individuals &amp; Co.

## To Notes Payable

Accepted Draft this day payable two months  
 after date at German National Bank Newark  
 N.J. Renewing our note of Sept 24-1901  
 bearing interest @ 6% per annum

105 Combrock Steam Boiler Co 1000.00

## 11 Individuals &amp; Co.

## To General Expense

To correct error in distribution of Material  
 Transfer Voucher 16241 items credited to  
 Raw Material instead of General Expense

153 Raw Material 76



Orange N.J. January 1902

151	Individuals & Co.	100	
151	To Individuals & Co.	100	
	Transfer to correct entry in Bates Sales		
	Bates Acct. 3692 charged to Richard Anderson Co.		
	Should be Rutland Anderson Co.		
74	Bates Acct. Rec.	800	
100	Rutland Anderson Co.	800	
144	Bates Acct. Rec.	800	
211	Richard Anderson Co.	800	
167	General Expenses	235	
151	To Individuals & Co.	235	
	To allow 2% Cash discount on the following		
	accounts entitled thereto and not previously		
	deducted		
74	Bates Acct. Rec.	235	
215	Montague & Co.	16	
217	Sawyer & Heyer	11	
1	N.J. Force & Co.	198	
151	Individuals & Co.	12221	
151	To Individuals & Co.	12221	
	Transferring from B. Co. Ledger into		
	Bates Acct. Rec. Ledger the following items		
100	N.J. Force & Co. Am't 16.22 74.62 74.62 84.20		
6	Stewart & Co. 74.62 74.62 74.62		
4	Shea Smith & Co. 74.62 74.62		
74	Bates Acct. Rec.	36.00	
1	N.J. Force & Co.	12221	
74	Stewart & Co.	84.20	
3	Shea Smith & Co.	301	
		36.00	
167	General Expenses	487	
151	To Individuals & Co.	487	
	To allow 2% Cash discount on N.J. Sales made		
	during December 1901		
	Debit 246.82		
	Credit 500		
		246.82	
74	Bates Acct. Rec.	487	
1	National Trust Co. Foreign Dept.	487	

Orange N.J. January 1902

✓	Surveys	31	
176	To Manufacturing	112024	
	To transfer amount of Labor & Material charged		
	to Shop Order 12524 up to and including Nov 19 1901		
	from Miscellaneous to Edison Motor account		
	also Labor & Material charged to special shop		
	Order 4296 up to and including Nov 19 1901 from		
	Miscellaneous to Machinery & Tools account		
176	Manufacturing	112024	
153	Edison Motor	88512	
156	C. Miscellaneous	88512	
159	Machinery & Tools	23512	
160	C. Miscellaneous	23512	
151	Individuals & Co.	31	
151	To Individuals & Co.	64	
	To transfer from B. Co. Ledger into Bates		
	Acct. Rec. Ledger amount of Am't 17-1902		
200	Town Mfg. Co.	64	
74	Bates Acct. Rec.	64	
210	Town Mfg. Co.	64	
151	Individuals & Co.	20	
122	To Note Payable	184422	
	Give this day our Note payable 6 months		
	after date @ German National Bank Newark		
	to apply on Nov. acct. Interest add @ 6% per		
	annum		
74	Bridgeport Brass Co.	184422	
151	Individuals & Co.	28	
122	To Note Payable	184422	
	Give this day our Note payable 6 months		
	after date @ German National Bank Newark		
	in settlement of November account. Interest		
	add @ 6% per annum		
74	Bridgeport Brass Co.	184422	

Orange NJ January 1902

153	Sales	31	9000	
153	To Sales		9000	
	To correct distribution of Bates Acct 54491			
	Credited to Auto Numl Mchs incld of Bates Mchrs			
154	Auto Numbering Machines	9000		
66	Bates Merchandise	9000		
157	General Expenses	31	12500	
157	To Individuals & Co.		12500	
	To transfer amount of Bates Extra Expenses			
	Incurred of January 1902 from Bates Acct			
	Rec. Ledger into General Ledger			
45	Bates Acct Rec	12500		
72	Bates Extra Expenses	12500		
167	General Expenses	31	100000	
167	To Individuals & Co.		100000	
	Salary for current month			
49	Phoe & Edison	100000		
171	Individuals & Co.	31	875	
171	To Individuals & Co.		875	
	To transfer from B-C's into Bates Acct Rec			
	Ledger amount of Cash returned by us			
	through Bates Cash to Edison Mfg Co books			
45	Bates Acct Rec	875		
50	P C Allen	875		
202	P C Allen	875		
167	General Expenses	31	6511	
167	To Individuals & Co.		6511	
	Amount of Bates Interest & Discount allowed			
	in settlement of account during current			
	month as recorded in Cash Book & folios			
	51 to 57 both inclusive			
75	Bates Acct Rec	6511		

Orange NJ January 1902

181	Individuals & Co.	31		52791.16
	To Sundries			
	Amount of Sales for month of January 1902			
	as recorded in Abstract of Sales folios 195 to			
	200 both inclusive to be credited as follows			
167	General Expenses		11578	
163	Sales		5279538	
163	Sales	31	12028	
163	To Individuals & Co.		12028	
163	To Commission on Sales of Auto Numl Mchs			
	& Bates Mchs for the month of January 1902			
	as recorded in Abstract of Sales folio 200			
164	Auto Numl Machines	5705.87	28	116.11
66	Bates Merchandise	508.28		
	Incurred Credited to B-C in Memo 40			
		50661.24	617	
7	J H Gladstone		12328	
	Sundries	31		
181	To Individuals & Co.		517951.1	
	Amount of Invoice vouchers during month			
	of January 1902 as recorded in Register of			
	Rebursment folios 296 to 301 both inclusive			
	chargeable to			
167	General Expenses		10065.16	
167	Machinery & Tools		20628	
31	Inventory & Furniture		112.19	
26	Real Estate & Buildings		824.19	
176	Manufacturing		12117.94	
191	Individuals & Co.		5505	
	Sundries	31		
176	To Manufacturing		13793.48	
	Amount of Material transferred during month			
	of January 1902 as recorded in Register of			
	Rebursment folios 302 chargeable to			
167	General Expenses		2210.79	
167	Machinery & Tools		121.85	
176	Manufacturing		11384.94	

Orange N.J. February 1902

56	Notes Receivable	10	2500.00	
152	To Individuals & Co		2500.00	
	Received this day National Photo Co note payable four months after date at Leman National Bank Newark N.J. applying on account			
271	National Photograph Co	2500.00		
151	Individuals & Co	10		
122	To Notes Payable		631.12	
	Accepted Draft this day payable one month after date at Leman National Bank Newark N.J. in settlement of Inv's 1902		631.12	
11	Smith & Nichols	631.12		
165	Dividend	20	6018.00	
182	To Individuals & Co		6018.00	
	For a dividend of $\frac{1}{25}$ per share on all stock of the Company entitled thereto as per resolution of the Board of Directors at a special Meeting held at the Edison Laboratory West Orange N.J. Monday Feb. 10-1902 at 9 o'clock A.M. $\frac{1}{25}$ of \$25000.00			
102	Chas. Walther	2500.00		
100	Wm. A. Edison	50.00	5750.00	
101	H. B. Archibald	50.00	5125.00	
1	Samuel Insull	5.00	625.00	
100	International Telegraphphone Co	113.00	1787.50	
17	Phos. A. Edison	2072.21	2590.46	
104	John F. Candolph	10.00	1245.00	
106	John C. Edman	5.00	625.00	
102	John C. Seaver	5.00	625.00	
106	J. S. McChesney	5.00	625.00	
105	Geo. W. Cutting	436.75	5405.94	
106	Walter Cutting	31.75	546.25	
		11814.40	6018.00	

Orange N.J. February 1902

56	Notes Receivable	21	2500.00	
182	To Individuals & Co		2500.00	
	Received this day National Photo Co Note payable four months after date at Leman National Bank Newark N.J. to apply on account			
271	National Photograph Co	2500.00		
151	Individuals & Co	28		
182	To Individuals & Co		75	
	To take out of Bates Suspense the amount of Inv. No. 1199 which was written off 7/21/1901		75	
145	Bates Accts Rec	75		
3	Bates Suspense	75		
75	Bates Accts Rec	75		
224	C. H. Barden	75		
151	Individuals & Co	28		
182	To Individuals & Co		19.86	
	To transfer from Bates Accts Rec Ledger into Co. Ledger the following items		19.86	
	Dividend & Co. Inv. No. 1199 $\frac{1}{25}$ of \$25.00		4.26	
	Roofkeeper Publishing Co. 7/9		15.00	
145	Bates Accts Receivable	19.86		
75	Stewart & Co	4.26		
8	Roofkeeper Pub'g Co	15.00		
6	Stewart & Co	4.26		
105	Roofkeeper Pub'g Co	15.00		
151	Individuals & Co	28		
182	To Individuals & Co		130.00	
	To correct error in posting Bates Bill 24573 same being posted to deb't of Scarff & O'Connor instead of Scarff Tag Label & Co		130.00	
11	Bates Accts Rec	130.00		
100	Scarff Tag Label & Co	130.00		
75	Bates Accts Rec	130.00		
6	Scarff & O'Connor Co	130.00		

Orange, N.J. February 1902

176	Manufacturing	21		38	
167	To General Expenses			38	
	To correct error in distribution of Raw Material Voucher #6478 dated Jan 14-1902				
	5 gals Kerosene chgs to EE should be Japanning				
12	Japanning	38			
		21			
167	General Expenses		6036		
172	To Individuals & Cos.			6036	
	To allow 2% Cash Disc't on Net purchases during month of January 1902				
	Debit purchases	518.53			
	Credits	520			
		318.03			
45	Bates Accts Rec	6.36			
1	National Phono Co For Depts.	6.36			
		21			
172	Individuals & Cos.		2423		
172	To Individuals & Cos.			2423	
	Transfers to balance account of National Phonograph Co Chicago				
172	National Phono Co Chicago	24.23			
45	Bates Accts Rec	24.23			
2	National Phono Co Chicago	24.23			
		21			
172	Individuals & Cos.		25.00		
172	To Individuals & Cos.			25.00	
	To transfer from S & Co Ledger into Bates Accts Rec Ledger amount of Jan 16-1902				
200	B. A. Kelly Co	25.00			
45	Bates Accts Rec	25.00			
101	B. A. Kelly Co	25.00			
		21			
167	General Expenses		10000.00		
172	To Individuals & Cos.			10000.00	
14	Salary for current month				
14	Phos Q. Edison	1000.00			

Orange, N.J. February 1902

167	General Expenses	21			
172	To Individuals & Cos.			10000	10000
	Transferring amount of Bates Extra Expenses for current month from Bates Accts Rec Ledger into General Ledger				
45	Bates Accts Rec	1000.00			
72	Bates Extra Expenses	1000.00			
		21			
176	Manufacturing		5925.57		
176	To Manufacturing			5925.57	
	Transferring to Miscellaneous Orders account the amount of Labor & Material charged to Phonograph Experimental, Tool & Attachment				
126	Miscellaneous Orders	5925.57			
145	Phonograph Experimental	176.95			
145	Tools	1,813.50			
147	Attachment	3925.42			
		21			
153	Sales			9604.85	
153	To Sales				9604.85
	Transferring to Miscellaneous Orders account the amount of Sales are dated to Phonograph Experimental Tools & Attachment				
71	Phonograph Experimental	394.86			
71	Tools	2962.09			
73	Attachment	6527.93			
26	Miscellaneous Orders	9604.85			
		21			
172	Individuals & Cos.			200	
172	To Individuals & Cos.				200
	To write off balance due same being uncollectable				
45	Bates Accts Rec	200			
3	Bates Suspenses	200			
45	Bates Accts Rec	200			
213	Remnant Rubber Stamp Co	200			

Orange N.J. February 1902

76	Manufacturing	21	1463.64	
176	Transferring amount of Labor & Material charged to Special Shop Order account to Miscellaneous Orders Account			1463.64
176	Miscellaneous Orders	1463.64		
139	Special Shop Order 265	1463.64		
153	Sales	28		
153	Transferring balance to credit of Special Shop Order account to credit of Miscellaneous Orders Account		1019.29	1019.29
109	Special Shop Order 265	1019.29		
26	Miscellaneous Orders	1019.29		
167	General Expenses	28		
31	Transferring amount of Labor & Material charged on Special Shop Order "to" to General Expense account		670.1	670.1
152	Individuals & Co's	28		
167	Amount of Cash Discount deducted in settlement of accounts during month of January 1902 as recorded in Cash Book 5 folios 51 to 63 both inclusive		876	876
167	General Expense	28		
172	Amount of Rate, Interest & Discount allowed in settlement of accounts during month of February 1902 as recorded in Cash Book 25 folios 51 to 63 both inclusive		75.85	75.85
145	Rate Acct. Recd	75.85		

Orange N.J. February 1902

153	Sales	28		
153	Transferring amount of Labor & Material charged to Special Shop Order account to credit of Miscellaneous Orders Account			117.82
14	Quits Mined Macher	1721.76	51	114.43
66	Rate Mdel	169.61	"	83.9
7	J.K. Bladestone			117.82
159	Machinery & Tools	28		
167	Transferring amount of Labor & Material charged to Spec Shop Order 573 from G.E. to M & S etc.		95.89	95.89
139	Bond Interest	28		
156	Amount of Bond Interest due on Coupon Series 29 remaining unclaimed and unpaid July 26 1902 and subject to demand		5000	5000
	Amount of Series	7500.00		
	Paid	7450.00		
152	Individuals & Co's	28		
152	Amount of Sales for current month as recorded in Abstract of Sales folios 202 to 210 both inclusive to be credited as follows		109753.43	
157	General Expenses			786.02
157	Machinery & Tools			444.41
176	Manufacturing			2.00
153	Sales			104100.40
✓	Sumdries	28		
176	Amount of Material Transfers for month of February 1902 as recorded in Register of Barbecues month folios 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000			

Orange N.J. February 1902

187	Individuals & Co	28	672
188	To Individuals & Co		672
To write off primary debit and credit balance appearing in the following accounts on the Sales Accts. Ledger Feb. 28-1901			
4	Sales Accts. Rec	672	
3	Sales Expenses	672	
4	Sales Accts. Rec	672	
222	E. J. Brightwell	67	
101	Jas. Inglis Jr	25	
205	G. B. Seeling	07	
214	Wm. W. Shakerman	11	
211	Oliver Soley	09	
220	Oswald Stebbins	30	
205	Gar. J. Tuttle	07	
100	L. S. Walter	672	
220	H. C. Ward and Co	02	
205	Long Exchange Trust	15	
211	Wm. H. Thompson	28	
202	Wm. H. Co	06	
212	F. L. Brown	03	
212	J. H. Brown	06	
215	Mary & William Brown	12	
203	Edison Manufacturing Co	25	
209	Charles W. Long	15	
211	Wm. H. Thompson	30	
220	L. S. Walter	06	
204	Thomas H. Co	08	
200	W. J. Brown & Co	02	
✓	Sundries	28	
187	To Individuals & Co		26029.95
Amount of Disbursements for month of February 1902 as recorded in the ledger of Disbursements for Feb. 28-1902 book inclusive chargeable to			
101	General Expense		
159	Machinery & Tools	14136.58	
20	Real Estate & Buildings	1522.44	
31	Sundries & Postages	824.40	
194	Manufacturing	000	
187	Individuals & Companies	19954.98	
		2800	

Orange N.J. February 1902

✓	Sundries	28	
187	To transfer Invoice Feb. 1901. Compare Invoices This Co. from E. H. Co. books to E. H. Co. books		114.68
176	Manufacturing		1109.3
101	Real Estate	1109.3	
167	General Expense		57.5
215	Edison Manufg Co	114.68	
✓	Sales	28	
176	To Manufacturing		525
To transfer amount of Sales credited to Japanning from Sales Ledger to Manufacturing Ledger			
61	Japanning	525	
12	Japanning	525	
177	Manufacturing	28	
167	To General Expense		10409.06
To transfer Expense directly chargeable to Sales Mfg Co. business			
27	Auto Numbering Machines	10409.06	
177	Manufacturing	28	
167	To General Expense		7942.19
To transfer amount standing to credit of Box Factory Account to credit of General Expense acct.			
101	Box Factory	7942.19	
153	Sales	28	
153	To Sales		4923.60
To transfer balance standing to credit of Scrap Account to credit of Phonograph			
102	Scrap	4923.60	
2	Phonograph	4923.60	

Orange NJ February 1902

177	Manufacturing	28	3976.20	
176	To Manufacturing		3976.20	
	To distribute for ratio balance missing in Japanning Account			
131	Japanning	3976.20		
6	Photograph	179.56639	3249.42	
126	Miscellaneous	14.501.65	208.10	
157	Spring Motor	11799.79	195.97	
156	Fan Motor	6616.02	123.34	
138	Deep Sine Telescope	2241.24	149.36	
		21.9728.39	3976.20	
8	Prof's & Loss	28	4027.560	
	To Securities			
	To write off the following accounts			
139	Bonds Interest		1500.00	
165	Dividends		3527.560	
8	Prof's & Loss	21	3003	
182	To Individuals & Co		3003	
	To transfer from Ratio Accts Acc'd Ledger into General Ledger the amount of Ratio Discrepancy for fiscal year ending Feb 28 1902			
162	Ratio Accts Acc'd	30.00		
3	Ratio Discrepancy	3003		
119	Machinery & Tools	28	1361.82	
113	To Sales		1361.82	
	To transfer amount of Bal 33292 Feb 1902			
	Credited to Mr F & Co to Miscellaneous Orders			
260	Miscellaneous Orders	1361.82		
119	Machinery & Tools	28	108.95	
113	To Sales		108.95	
	To transfer amount of Bal 33293 Feb 1902			
	Credited to Mr F & Co to Miscellaneous Orders			
26	Miscellaneous Orders	108.95		

Orange NJ February 1902

119	Machinery & Tools	28		
113	To Sales		671.91	671.91
	To transfer amount of Bal 33292 Feb 1902			
	Credited to Mr F & Co to Miscellaneous Orders			
26	Miscellaneous Orders	671.91		
119	Machinery & Tools	28	3701.26	
113	To Sales		3701.26	
	To transfer amount of Bal 33293 Feb 1902			
	Credited to Mr F & Co to Miscellaneous Orders			
26	Miscellaneous Orders	3701.26		
177	Manufacturing	28	64.65	
119	To Machinery & Tools		64.65	
	Transferring amount of Labor & Material charged against Spec Shop Order 191 from Mr F & Co into Miscellaneous Orders			
126	Miscellaneous Orders	64.65		
177	Manufacturing	28	76.99	
119	To Machinery & Tools		76.99	
	To transfer amount of Labor & Material charged against Spec Shop Order 225 from Mr F & Co into Miscellaneous Orders			
126	Miscellaneous Orders	76.99		
177	Manufacturing	28	81.402	
119	To Machinery & Tools		81.402	
	To transfer amount of Labor & Material charged against Spec Shop Order 225 during fiscal year ending Feb 21 1902 from Mr F & Co into Miscellaneous Orders			
126	Miscellaneous Orders	81.402		
177	Manufacturing	28	110.61	
119	To Machinery & Tools		110.61	
	Transferring amount of Labor & Material charged against Spec Shop Order 224 from Mr F & Co into Miscellaneous Orders			
126	Miscellaneous Orders	810.61		

Orange N.J. February 1902

77	Manufacturing	28	1145.26	
159	To Machinery & Tools		1218.26	
	To transfer amount of Labor & Material charged against Spec Shop Order #96 from M.F. Co. into Miscellaneous Order #96			
12	Miscellaneous Order #96		1145.26	
167	General Expenses	28	659.23	
159	To Machinery & Tools		659.23	
	To correct errors in distribution of accounts as shown in Report of Disbursements during fiscal year ending Feb'y 28 1902 as per detail attached to vouchers			
167	General Expenses	28	35.16	
31	To Furniture & Fixtures		35.16	
	To correct errors in distribution of Accts Payable Vouchers			
	#12152 5.25 mfg			
	#12112 27.00 oil			
	#15439 36.1 Misc.			
	28			
153	Sales		230.00	
153	To Sales		230.00	
	To transfer amount credited to Material Sales by Journal entry Aug 28 1901 folio 40. to Miscellaneous Order #96			
56	Material Sales		230.00	
96	Miscellaneous Order #96		230.00	
8	Profits & Loss			
17	To General Expenses		21654.14	
	To write off Legal Expenses amounting to \$46.61 also Expenses		34574.14	
	incurred during fiscal year ending Feb'y 28 1902			

Orange N.J. February 1902

152	Individuals & Co	28		
152	To Sales		26494.64	
	To charge National Phonograph Co. with an amount sufficient to make profits on Phonographs equal 15%		26494.64	
	Total Cash		502708.48	
	Less Inventory		42082.02	
			254626.46	
	15%		38200.20	
	Profits shown by Ledger		41705.26	
21	National Phonograph		26494.64	
2	Phonograph		26494.64	
153	Sales	28		
152	To Individuals & Co		42980.72	
	To credit National Phonograph Co. with an amount sufficient to reduce Profits on Wax & Spring Motors to 15%		42980.72	
	Total Cash		192152.17	
	Less Inventory		17906.62	
			174245.55	
	15%		26137.39	
	Profits shown by Ledger		64496.72	
			41261.58	
			1619.54	
8	Wax		1619.54	
114	Spring Motors		1619.54	
71	National Phonograph Co.		42980.72	
	28			
177	Manufacturing		166036.50	
167	To General Expenses		166036.50	
	To distribute separate General Expense & Depreciation over following accounts			
6	Phonograph		65976.76	
28	Cylinder & Horn Machine		16200.99	
143	Wax		44163.73	
126	Miscellaneous		6419.97	
17	Spring Motors		3966.62	
116	Wax Motors		2504.26	
128	Box Phonographs		3000.59	
126	Cabinet		3351.74	
153	Edison Motors		5863.14	



Orange, N.J. February, 1902

103 Sales	28	599,255.83
171 To Manufacturing		599,255.83
To transfer cost of Sales of the following accounts for fiscal year ending July 25, 1902		
2 Phonographs	252,669.39	6
14 Cuts Thumb Machines	44,456.91	28
66 Bate Merchandises	1,418.76	116
8 Wax	1,542,49.28	143
26 Miscellaneous	21,912.45	126
114 Spring Motor	15,109.04	151
105 Fan Motor	1,0187.05	106
38 Prof. Spectroscope	11,483.63	128
69 Cabinet	837,84.97	136
56 Raw Material Sales	1954.05	104

103 Sales	28	660,996.8
8 To Profit & Loss		660,996.8
For Profit realized on the following accounts during fiscal year ending July 25, 1902		
2 Phonographs	38,200.40	
14 Cuts Thumb Machines	18,295.42	
66 Bate Merchandises	1,345.96	
8 Wax	23,137.39	
26 Miscellaneous	7,142.16	
114 Spring Motor	2266.35	
105 Fan Motor	600.75	
56 Raw Material Sales	634.93	
38 Prof. Spectroscope	796.15	
69 Cabinet	24,721.53	

107 General Expenses	28	24,524.14
8 To Profit & Loss		24,524.14
To cancel Journal entry made in error Jan Feb 98 amount being included in pro rata distribution of General Expenses		

Orange N.J. March 1902

123 <sup>3</sup> Individuals & Cos 1000.00  
<sup>123</sup> To Notes Payable 1000.00  
 Gave our Note dated March 3rd 1901 payable four months after date @ German Natl Bank Newark N.J. renewing Note dated 12/30/1901 due this day.  
 1 Samuel Insull 1000.00

123 <sup>8</sup> Individuals & Cos 3779.05  
<sup>✓</sup> To Sundries  
 Accepted Draft this day dated Mar 8 1902 at 3 and 4 months respectively payable @ German National Bank Newark N.J. in settlement of account to Mar 1st 1902. Interest added @ 6% per annum.  
<sup>123</sup> Co. Notes Payable (3 Mos. Note) 1884.81  
<sup>123</sup> " " (4 " " " ) 1894.17  
 9 Q. Weston & Sons 3779.05

123 <sup>11</sup> Individuals & Cos 2298.59  
<sup>✓</sup> To Sundries  
 Accepted two Draft this day dated Mar 11 1902 payable three and four months after date respectively @ German National Bank Newark N.J. in settlement of account to Jan 1st 1902. Interest added from Mar 1st @ 6% per annum.  
<sup>123</sup> Co. Notes Payable (3 Mos. Note) 1146.47  
<sup>123</sup> " " (4 Mos " ) 1152.12  
 1 John F. Felt & Co. 2298.59

123 <sup>12</sup> Individuals & Cos 3669.70  
<sup>✓</sup> To Sundries  
 Accepted Draft this day dated Mar 12 1902 at 3 and 4 months respectively payable @ German National Bank Newark N.J. in settlement of account to Jan 1st 1902. Interest added @ 6% per annum.  
<sup>123</sup> Co. Notes Payable (3 Mos. Note) 1820.34  
<sup>123</sup> " " (4 " " " ) 1849.36  
 1 Bridgeport Brass Co. 3669.70

Orange N.J. March 1902

123 <sup>13</sup> Individuals & Cos 1.3  
<sup>123</sup> To Individuals & Cos 1.3  
 Transferring from Dr Cos Ledger into Bates Acct Ledger amount of Invoice 7/10-1902  
 6 Stewart & Co 1.3  
 45 Bates Acct Rec 1.3  
 36 Stewart & Co 1.3

123 <sup>216</sup> Individuals & Cos 8.3  
<sup>123</sup> To Individuals & Cos 8.3  
 To transfer amount paid Geo Hill through Bates Cash this day from Dr Cos Ledger into Bates Acct Rec Ledger  
 45 Bates Acct Rec 8.3  
 216 Geo Hill 8.3  
 204 Geo Hill 8.3

123 <sup>31</sup> General Expense 1000.00  
<sup>123</sup> To Individuals & Cos 1000.00  
 Salary for Current Month  
 19 Theo A. Edison 1000.00

123 <sup>31</sup> Individuals & Cos 10.57  
<sup>123</sup> To Individuals & Cos 10.57  
 To write off amount in dispute as per instructions of Mr. Gilman  
 45 Bates Acct Rec 10.57  
 3 Bates Suspense 10.57  
 45 Bates Acct Rec 10.57  
 3 Edw. Sampson 10.57

123 <sup>31</sup> General Expense 40.19  
<sup>123</sup> To Individuals & Cos 40.19  
 Amount of Cash Discount allowed in settlement of Bates Account Receivable during month of March 1902 as recorded in Cash Book 45 folios 64 to 69 both inclusive  
 45 Bates Acct Rec 40.19

Orange NJ March 1902

147	General Expense	31	100.00
152	To Individuals & Cos		100.00
To transfer amount of Bates Extra Expense for month of March 1902 from Bates Accts Rec Ledger into General Ledger			
148	Bates Accts Rec	100.00	
147	Bates Extra Expense	100.00	
147	General Expense	31	2.05
152	To Individuals & Cos		2.05
To allow 2% Cash Disc't on Net purchases for February 1902 amounting to 102.44			
148	Bates Accts Rec	2.05	
1	National Photo Co Foreign Dep't	2.05	
152	Individuals & Cos	31	65616.59
To Sundries			
Amount of Sales for month of March 1902 as recorded in Abstract of Sales folios 212 to 217 both inclusive to be credited as follows			
147	General Expense		104.26
149	Machinery & Tools		299.50
153	Sales		65213.12
153	Sales	31	119.50
152	To Individuals & Cos		119.50
2% Commission on Sales of Bates Meters & Auto Numbering Machine for March 1902 as recorded in Abstract of Sales folio 217 also on amount of Repairs for month of February not included in formal entry for that month			
148	Bates Meter Machine (March)	5562.85	
	(Repair Feb)	149.69	
146	Bates Merchandise	5720.54	114.47
		251.94	500
7	J. K. Gladstone	577.58	119.50
			119.50

Orange NJ March 1902

✓	Sundries	31	
152	To Individuals & Cos		61260.58
Amount of Disbursements vouchered during month of March 1902 as recorded in Register of Disbursements folios 5 to 6 both inclusive chargeable to			
147	General Expense		13,463.97
149	Machinery & Tools		261.19
177	Manufacturing		5256.74
152	Individuals & Companies		36.48
✓	Sundries	31	
177	To Manufacturing		16224.52
Amount of Material Transfers for month of March 1902 as recorded in Register of Disbursements folio 7 chargeable to			
147	General Expense		3131.29
149	Machinery & Tools		61.91
177	Manufacturing		15022.55

Orange NJ April 1902

150 Individuals & Co  
 153 To Notes Payable  
 Accepted Draft this day payable 60 days  
 at 5% date at German National Bank  
 Newark NJ in settlement of account to  
 Marx at 100. Interest added as follows  
 60 days interest on 1000 90  
 30 " " 45  
 150 Empire Insulated Wire Co 181877

150 Individuals & Co  
 153 To Individuals & Co  
 Transferring from P Co Ledger into Bates  
 Accts Rec Ledger the following items deducted  
 in settlement this day  
 100 W. Force & Co Int 1/2 1/2 1/2 4.00  
 6 Stewart & Co " 1/2 1/2 1/2 2.66  
 302 John Gladding Co. Memo 1/2 paid due 10/10/01 50  
 45 Bates Accts Rec 29.96  
 1 W. Force & Co 4.00  
 316 Stewart & Co 26.66  
 310 John Gladding 50

150 Individuals & Co  
 153 To Individuals & Co  
 To write off amount standing to the debit of  
 N. J. Java Trading Co not having this day accepted  
 settlement @ 5% discount  
 45 Bates Accts Rec 15.00  
 5 Bates Shipman 15.00  
 45 Bates Accts Rec 15.00  
 100 N. J. Java Trading Co 15.00

150 Individuals & Co  
 123 To Notes Payable  
 Note dated this day payable Sept 1902 at German  
 National Bank Newark NJ. Renewing Note  
 dated 12/31/01 due this day  
 With interest @ 5% per annum  
 1 Samuel Insull 2000.00

151877

29.96

1533

2000.00

2000.00

Orange NJ April 1902

160 General Expenses 30  
 152 To Individuals & Co  
 To allow 2% Cash Discount on Net purchases  
 during month of March 1902 362.21  
 45 Bates Accts Rec 7.24  
 1 National Phone Co Foreign Dep. 7.24

150 Individuals & Co  
 152 To Individuals & Co  
 To Credit Nat Phone Co with amount of  
 Int 1/2 - Nealey & Co same being applied  
 in settlement of their account on National  
 Phone Co books  
 102 Nealey & Co 25.67  
 377 National Phone Co 25.67

150 Individuals & Co  
 152 To Individuals & Co  
 Transferring amount of Int 1/2 - 100 from  
 P Co Ledger into Bates Accts Rec Ledger  
 to balance account to date  
 302 Photo-American Engraving Co 4.50  
 45 Bates Accts Rec 4.50  
 201 Edw Newcomb 4.50

160 General Expenses 30  
 152 To Individuals & Co  
 Amount of Cash Discount allowed in  
 settlement of Bates Accts Receivable during  
 current month as recorded in Cash Book  
 at 5% 70 to 75 both inclusive  
 45 Bates Accts Rec 61.03

150 General Expenses 30  
 152 To Individuals & Co  
 Salary for current month  
 17 Thos A Edison 100.00

724

2567

450

61.03

1000.00

1000.00

Orange N.J. April 1902

161	General Expenses	30	100.00
162	To Individuals & Co.		100.00
	To transfer amount of Bates Extra Expenses for current month from Bates Accts Rec Ledger into General Ledger		
165	Bates Accts Rec	100.00	
167	Bates Extra Expenses	100.00	
161	General Expenses	30	
169	To Machinery & Tools		13.75
	To correct distribution of Accounts Payable Voucher 76115 the first four items on Jan 7, 1902 - 15.95 being charged to Machinery & Tools in error		13.75
169	Machinery & Tools	30	299.52
163	To Sales		299.52
	To correct distribution of Bal 237.41 76-100 which was credited to Machinery & Tools instead of Miscellaneous Orders		
26	Co. Miscellaneous Orders	299.52	
177	Manufacturing	30	
151	To Machinery & Tools		262.18
	To transfer amount of Labor & Material charged against Spec Shop Order 496 from Mar 1st 1902 up to and including Apr 5 1902 from Mch & Tools account into Miscellaneous Orders		262.18
26	Miscellaneous Orders	262.18	
112	Individuals & Co.	30	
	To Sundries		637.41 03
	Amount of Sales for month of April 1902 as recorded in Abstract of Sales folios 219 to 225 both inclusive to be credited as follows		
168	General Expenses		18.25
163	Sales		63.657 50
177	Manufacturing		25

Orange N.J. April 1902

153	Sales	30	
183	To Individuals & Co.		119.51
21	Commission on Sales of Auto Trucks		419.51
	Machines. Bates Made for month of April 1902 as recorded in Abstract of Sales folio 225		
	See amounts written off to Suspense account during March & April 1902		
66	Bates Made	207.91 26	116
141	Auto Trucks & Machs.	179.94	
	less Suspense (Exemption)	1.00	
	" (75) Jan 1902 G	10.50	115.51
		297.50 49	119.51
7	J. H. Gladstone	30	
	Sundries		
183	To Individuals & Co.		719.50 50
	Amount of Disbursements vouchered during month of April 1902 as recorded in Register of Disbursements folios 8 to 14 both inclusive chargeable to		
168	General Expenses		116.42 81
177	Machinery & Tools		16.3 89
31	Furniture & Fixtures		17.20
177	Manufacturing		60.60 92 1
183	Individuals & Companies		45.29
	30		
✓	Sundries		
177	To Manufacturing		177.67 41
	Amount of Material transferred for month of April 1902 as recorded in Register of Disbursements folio 14 chargeable to		
168	General Expenses		207.8 96
177	Manufacturing		153.20 45

Orange, N.J. May 1902

113	<u>Individuals &amp; Co.</u>		620
113	<u>To Individuals &amp; Co.</u>		620
	Transferring from Dr. Co. Ledger into Dates Co.'s Rec. Ledger the following invoices deducted in settlement this day. 4/1. 20 4/2. 4/3. 4/4. 4/5. 4/6. 4/7. 4/8. 4/9. 4/10. 4/11. 4/12. 4/13. 4/14. 4/15. 4/16. 4/17. 4/18. 4/19. 4/20. 4/21. 4/22. 4/23. 4/24. 4/25. 4/26. 4/27. 4/28. 4/29. 4/30. 4/31. 4/32. 4/33. 4/34. 4/35. 4/36. 4/37. 4/38. 4/39. 4/40. 4/41. 4/42. 4/43. 4/44. 4/45. 4/46. 4/47. 4/48. 4/49. 4/50. 4/51. 4/52. 4/53. 4/54. 4/55. 4/56. 4/57. 4/58. 4/59. 4/60. 4/61. 4/62. 4/63. 4/64. 4/65. 4/66. 4/67. 4/68. 4/69. 4/70. 4/71. 4/72. 4/73. 4/74. 4/75. 4/76. 4/77. 4/78. 4/79. 4/80. 4/81. 4/82. 4/83. 4/84. 4/85. 4/86. 4/87. 4/88. 4/89. 4/90. 4/91. 4/92. 4/93. 4/94. 4/95. 4/96. 4/97. 4/98. 4/99. 4/100. 4/101. 4/102. 4/103. 4/104. 4/105. 4/106. 4/107. 4/108. 4/109. 4/110. 4/111. 4/112. 4/113. 4/114. 4/115. 4/116. 4/117. 4/118. 4/119. 4/120. 4/121. 4/122. 4/123. 4/124. 4/125. 4/126. 4/127. 4/128. 4/129. 4/130. 4/131. 4/132. 4/133. 4/134. 4/135. 4/136. 4/137. 4/138. 4/139. 4/140. 4/141. 4/142. 4/143. 4/144. 4/145. 4/146. 4/147. 4/148. 4/149. 4/150. 4/151. 4/152. 4/153. 4/154. 4/155. 4/156. 4/157. 4/158. 4/159. 4/160. 4/161. 4/162. 4/163. 4/164. 4/165. 4/166. 4/167. 4/168. 4/169. 4/170. 4/171. 4/172. 4/173. 4/174. 4/175. 4/176. 4/177. 4/178. 4/179. 4/180. 4/181. 4/182. 4/183. 4/184. 4/185. 4/186. 4/187. 4/188. 4/189. 4/190. 4/191. 4/192. 4/193. 4/194. 4/195. 4/196. 4/197. 4/198. 4/199. 4/200. 4/201. 4/202. 4/203. 4/204. 4/205. 4/206. 4/207. 4/208. 4/209. 4/210. 4/211. 4/212. 4/213. 4/214. 4/215. 4/216. 4/217. 4/218. 4/219. 4/220. 4/221. 4/222. 4/223. 4/224. 4/225. 4/226. 4/227. 4/228. 4/229. 4/230. 4/231. 4/232. 4/233. 4/234. 4/235. 4/236. 4/237. 4/238. 4/239. 4/240. 4/241. 4/242. 4/243. 4/244. 4/245. 4/246. 4/247. 4/248. 4/249. 4/250. 4/251. 4/252. 4/253. 4/254. 4/255. 4/256. 4/257. 4/258. 4/259. 4/260. 4/261. 4/262. 4/263. 4/264. 4/265. 4/266. 4/267. 4/268. 4/269. 4/270. 4/271. 4/272. 4/273. 4/274. 4/275. 4/276. 4/277. 4/278. 4/279. 4/280. 4/281. 4/282. 4/283. 4/284. 4/285. 4/286. 4/287. 4/288. 4/289. 4/290. 4/291. 4/292. 4/293. 4/294. 4/295. 4/296. 4/297. 4/298. 4/299. 4/300. 4/301. 4/302. 4/303. 4/304. 4/305. 4/306. 4/307. 4/308. 4/309. 4/310. 4/311. 4/312. 4/313. 4/314. 4/315. 4/316. 4/317. 4/318. 4/319. 4/320. 4/321. 4/322. 4/323. 4/324. 4/325. 4/326. 4/327. 4/328. 4/329. 4/330. 4/331. 4/332. 4/333. 4/334. 4/335. 4/336. 4/337. 4/338. 4/339. 4/340. 4/341. 4/342. 4/343. 4/344. 4/345. 4/346. 4/347. 4/348. 4/349. 4/350. 4/351. 4/352. 4/353. 4/354. 4/355. 4/356. 4/357. 4/358. 4/359. 4/360. 4/361. 4/362. 4/363. 4/364. 4/365. 4/366. 4/367. 4/368. 4/369. 4/370. 4/371. 4/372. 4/373. 4/374. 4/375. 4/376. 4/377. 4/378. 4/379. 4/380. 4/381. 4/382. 4/383. 4/384. 4/385. 4/386. 4/387. 4/388. 4/389. 4/390. 4/391. 4/392. 4/393. 4/394. 4/395. 4/396. 4/397. 4/398. 4/399. 4/400. 4/401. 4/402. 4/403. 4/404. 4/405. 4/406. 4/407. 4/408. 4/409. 4/410. 4/411. 4/412. 4/413. 4/414. 4/415. 4/416. 4/417. 4/418. 4/419. 4/420. 4/421. 4/422. 4/423. 4/424. 4/425. 4/426. 4/427. 4/428. 4/429. 4/430. 4/431. 4/432. 4/433. 4/434. 4/435. 4/436. 4/437. 4/438. 4/439. 4/440. 4/441. 4/442. 4/443. 4/444. 4/445. 4/446. 4/447. 4/448. 4/449. 4/450. 4/451. 4/452. 4/453. 4/454. 4/455. 4/456. 4/457. 4/458. 4/459. 4/460. 4/461. 4/462. 4/463. 4/464. 4/465. 4/466. 4/467. 4/468. 4/469. 4/470. 4/471. 4/472. 4/473. 4/474. 4/475. 4/476. 4/477. 4/478. 4/479. 4/480. 4/481. 4/482. 4/483. 4/484. 4/485. 4/486. 4/487. 4/488. 4/489. 4/490. 4/491. 4/492. 4/493. 4/494. 4/495. 4/496. 4/497. 4/498. 4/499. 4/500. 4/501. 4/502. 4/503. 4/504. 4/505. 4/506. 4/507. 4/508. 4/509. 4/510. 4/511. 4/512. 4/513. 4/514. 4/515. 4/516. 4/517. 4/518. 4/519. 4/520. 4/521. 4/522. 4/523. 4/524. 4/525. 4/526. 4/527. 4/528. 4/529. 4/530. 4/531. 4/532. 4/533. 4/534. 4/535. 4/536. 4/537. 4/538. 4/539. 4/540. 4/541. 4/542. 4/543. 4/544. 4/545. 4/546. 4/547. 4/548. 4/549. 4/550. 4/551. 4/552. 4/553. 4/554. 4/555. 4/556. 4/557. 4/558. 4/559. 4/560. 4/561. 4/562. 4/563. 4/564. 4/565. 4/566. 4/567. 4/568. 4/569. 4/570. 4/571. 4/572. 4/573. 4/574. 4/575. 4/576. 4/577. 4/578. 4/579. 4/580. 4		

Orange N.J. May 1902

183	Individuals & Co	31	
183	To Individuals & Co		2.5
	To credit account of Jackson Stationery Co		
	with amount of our credit - 33071. 7/2-1901		
	which was written off to suspense 7/2-1901		
44	Pat's Accts Rec	25	
9	Pat's Suspense	25	
44	Pat's Accts Rec	25	
203	Jackson Stationery Co	25	
183	Individuals & Co	31	
183	To Individuals & Co		2.5
	To transfer from Dr Co's ledger into Pat's		
	Accts Rec ledger amount of your Pat's Credit		
	33071. 7/2-1901 - paid through City Cash		
	this day		
44	Pat's Accts Rec	25	
203	Jackson Stationery Co	25	
260	Jackson Stationery Co	25	
183	Individuals & Co	31	
183	To Individuals & Co		16040.75
	To transfer balance standing to credit of		
	F. A. Edison to account of National Phon Co		
10	Phon. Edison	16040.75	
2	National Phonograph Co	16040.75	
	31		
183	General Expenses	14.5	
31	To Furniture & Fixtures		14.5
	To correct distribution of Accounts Payable		
	Voucher - 17054 charged to F. A. Edison		
	31		
183	General Expenses	3.93	
183	To Individuals & Co		3.93
	To allow 2% Cash Discount on Net		
	purchase for April, which amount to		
44	Pat's Accts Rec	3.93	
1	National Phon Co Foreign Reps	3.93	

Orange N.J. May 1902

183	Individuals & Co.	29	4070.00
	To Sundries		
	Bare this May two Notes payable three and four months, after date respectively to Commercial National Bank Newark N.J. in settlement of account on file to May 1st. Interest added @ 6% per annum		
123	Notes Payable	3 mos	2650.00
123	"	"	2040.00
9	Wheaton & Son	4070.00	
161	General Expense	31	1000.00
	To Individuals & Co.		
140	Thos Edison	1000.00	
161	General Expense	31	125.00
	To Individuals & Co.		
133	Transferring amount of Bates Extra Expense for current month from Bates Acct Rec Ledger into General Ledger		
45	Bates Acct Rec	125.00	
45	Bates Extra Expense	125.00	
133	Individuals & Co.	31	140.00
	To Individuals & Co.		
	To write off amount of Bates Rec 56619 309-1902 as per instructions of Mr. Edmund Gerdner bel in transit		
45	Bates Acct Rec	140.00	
3	Bates Suspense	140.00	
71	Bates Acct Rec	140.00	
106	Wilton Humphrey & Co	140.00	
133	Individuals & Co.	31	300.00
	To Individuals & Co.		
	Transfer to apply amount of Natsl Phon G. Co. 7 against their account on Natl Phon G. Co. books		
112	Natsl Phon G.	300.00	
2	National Phonograph Co.	300.00	

Orange N.J. May 1902

163	General Expense	31	792.1
	To Individuals & Co.		
	Amount of Bates Interest & Discount allowed in settlement of accounts during current month as recorded in Cash Book 75 folios 16-21 both inclusive		
45	Bates Acct Receivable	792.1	
163	Individuals & Co.	31	55230.55
	To Sundries		
	Amount of Sales for current month as recorded in Abstract of Sales folios 237 to 232 both inclusive to be credited as follows		
166	General Expense	55231	
166	Sales	54862.26	
163	Individuals & Co.	31	879
	To General Expense		
	Amount of Cash Discount deducted in settlement of Trade Invoices during May as recorded in Cash Book 5 folios 81		
✓	Sundries	31	
163	Individuals & Co.	31	61356.69
	To Individuals & Co.		
	Amount of Disbursements vouchers during month of May 1902 as recorded in Register of Disbursements folios 16 to 21 both inclusive chargeable to		
168	General Expense	12576.65	
177	Machinery & Tools	1968.89	
177	Manufacturing	12676.30	
163	Individuals & Companies	39.05	
✓	Sundries	31	
177	Manufacturing	12664.30	
	To Manufacturing		
	Amount of Material Transfers for month of May 1902 as recorded in Register of Disbursements folios 21 chargeable to		
168	General Expense	2765.96	
177	Machinery & Tools	127	
177	Manufacturing	12677.07	

Orange N.J. June 1902

100	Individuals & Co	3	1020.00	
123	To Note Payables			1020.00
	Gave this day one Note payable 3 months after date at German National Bank Newark in settlement of account to Apr int. Interest added @ 6% per annum			
1	John Toler Smith & Co	1020.00		
113	Individuals & Co	4	2035.00	
123	To Sundries			
	Gave this day two Notes payable three & four months after date respectively at German National Bank Newark N.J. applying on account. Interest added @ 6% per annum			
123	Note Payable 3 mos		1015.00	
123	" 4 "		1020.00	
1	Bridgeport Brass Co	2035.00		
51	Notes Receivable	5	2969	
113	To Individuals & Co			2969
	Received this day Note at one month payable at Newark N.J. National Bank New Haven Conn. in settlement of account to June 1st 1902			
4	Dates Accts Rec	2969		
1	Valentine Stamp Mks.	2969		
51	Notes Receivable	10	2000.00	
113	To Individuals & Co			2000.00
	Received this day Note at four months payable at German National Bank Newark N.J. on account			
71	National Photographic Co	2000.00		
113	Individuals & Co	13	3617	
123	To Individuals & Co			3617
	Transferring amount of Nealy's account from Note against their account on Natl Photo Co book.			
102	Nealy & Co	3617		
71	National Photographic Co	3617		

Orange N.J. June 1902

117	Manufacturing	30		
161	To General Expense		124.96	124.96
	To correct entry in Register of Disbursement of Voucher 1702 which was distributed to Co instead of Material			
153	Raw Material	124.96		
113	Individuals & Co	30		
113	To Individuals & Co		157	157
	Transfer to balance account			
4	Dates Accts Rec	157		
4	J.H. Thomson	117		
201	Northern Central RR Co	70		
4	Dates Account Rec	157		
206	Nela Jackson Western RR Co	117		
213	N.C. French	70		
161	General Expense	30		
113	To Individuals & Co		1000.00	1000.00
	Transferring amount of Dates Extra Expense for current month from Dates Accts Rec Ledger into General Ledger			
4	Dates Accts Rec	100.00		
2	Dates Extra Expense	100.00		
113	Individuals & Co	36		
113	To Sundries		3652.50	
	Gave this day two Notes payable three & four months after date respectively at Union National Bank Newark N.J. Interest added @ 6% per annum			
123	Co Note Payable (3 mos Note)		1522.50	
123	" 4 "		1530.00	
1	Bridgeport Brass Co	3652.50		
161	General Expense	30		
113	To Individuals & Co		396	396
	To allow J.H. Cash Disburse on Natl purchases for month of May 1902			
	Natl purchases 190.11	24		
4	Dates Accts Rec	396		
1	Natl Photo Co Group - Exp.	396		



Orange NJ June 1902

56 Notes Receivable	23	2000.00	
183 To Individuals & Co.		2000.00	
Received this day Note at four months payable to Union National Bank Newark NJ on settlement of account to be apply on account			
703 National Photographic Co.	30	2000.00	
166 General Expense		44.68	
183 To Individuals & Co.		44.68	
Amount of Cash Discount allowed in settlement of accounts during month of June 1902 as recorded in Cash Book 5 folios 52 to 56 both inclusive			
461 Dates Accts Rec	36	44.68	
183 Individuals & Co.		49,052.30	
To Sundries			
Amount of Sales for month of June 1902 as recorded in Abstract Sales folios 536 to 540 both inclusive to be credited to			
166 General Expense		64.50	
153 Sales		49,117.10	
✓ Sundries	30		
183 To Individuals & Co.		47,240.72	
Amount of Disbursements vouchered during month of June 1902 as recorded in Register of Disbursements folios 52 to 59 both inclusive chargeable to			
161 General Expense		1,112.50	
184 Machinery & Tools		674.48	
177 Manufacturing		2551.02	
183 Individuals & Co.		30.90	
✓ Sundries	30		
177 To Manufacturing		1,226.10	
Amount of Material Transfers for month of June 1902 as recorded in Register of Disbursements folio 29 chargeable to			
161 General Expense		2803.93	
184 Machinery & Tools		231.00	
177 Manufacturing		9434.03	

Orange NJ July 1902

183 Individuals & Co.	1	1224.00	1224.00
123 To Notes Payable			
Gave this day our Note payable 4 months after date to Union National Bank Newark NJ on settlement of account to May 1st Interest added @ 6% per annum			
1 John Toler Sons & Co.	3	1224.00	
183 Individuals & Co.		1000.00	1000.00
123 To Notes Payable			
Gave this day our Note payable 4 months after date to Union National Bank Newark NJ renewing note of like amount due this day with interest @ 5% per annum			
1 Samuel Insull	14	1000.00	
56 Notes Receivable	14	1572.98	
183 To Individuals & Co.		1572.98	
Received this day Note @ 4 months on settlement of July 24-31-31 Interest added @ 6% per annum			
5 Edison Portland Cement Co.	15	1572.98	
183 Individuals & Co.		1075.03	1075.03
123 To Notes Payable			
Accepted Draft this day @ 30 days sight payable to Union National Bank Newark NJ settlement of Invoice dated June 30, 1902			
5 American Oil Supply Co.	17	1075.03	
166 General Expense		4.51	
183 To Individuals & Co.		4.51	
To allow 2% Cash Discount on Net purchases for month of June 1902			
Debit purchases		220.29	
Credits		150	
Net purchases		229.09	
461 Dates Accts Rec		46.58	
1 National Photo Co. Foreign Dept.		46.58	

Orange N.J. July 31-1902

161	General Expense	31		
183	To Individuals & Cos		100.00	100.00
	Transferring amount of Bates Extra Expense for month of July 1902 from Bates Acct. Re Ledger into General Ledger			
415	Bates Acct. Receivable	100.00		
72	Bates Extra Expense	100.00		
	31			
113	Individuals & Cos		4.8	4.8
183	To Individuals & Cos			4.8
	Transferring from S & Co. Ledger into Bates Acct. Re Ledger amount of invoice 74-14			
1	Stewart & Co.	4.8		
415	Bates Acct. Rec.	4.8		
76	Stewart & Co.	4.8		
	31			
161	Individuals & Cos		239	239
183	To Individuals & Cos			239
	Transferring from S & Co. Ledger into Bates Acct. Re Ledger the following items paid through City Cash during current month.			
415	Bates Acct. Rec.	239		
224	C. H. Bandem	65		
3	Geo. H. Hewitt	90		
107	Welson Bros	84		
202	C. H. Bandem	65		
201	Geo. H. Hewitt	90		
205	Welson Bros	84		
	31			
183	Individuals & Cos		2969	2969
56	To Cancel Journal Entry of June 5-1902 same being made in error			
415	Bates Acct. Rec.	2969		
1	Valentine Stamp Co.	2969		

Orange N.J. July 1902

183	Individuals & Cos	31		
183	Individuals & Cos		2969	2969
	Accrued June 5th 1902 Note at one month payable to Merchant National Bank New Haven Conn in settlement of account to June 1-1902			
415	Bates Acct. Rec.	2969		
161	Bates Note Receivable	2969		
415	Bates Acct. Rec.	2969		
1	Valentine Stamp Co.	2969		
	31			
183	Individuals & Cos		06	06
161	To General Expense			06
	Amount of Interest added to Note of Valentine Stamp Co. paid July 1st-1902			
415	Bates Acct. Rec.	06		
101	Bates Note Receivable	06		
	31			
183	Individuals & Cos		300	300
118	To General Expense			300
	To correct error in distribution of Petty Cash Voucher 77752			
101	W. J. Smith Supply Co.	300		
	31			
183	Individuals & Cos		677	677
161	To General Expense			677
	Amount of Cash Discount deducted in settlement of account for month of July as recorded in Cash Book & folio 77592 bid inclusive			
161	General Expense		5922	5922
183	To Individuals & Cos			5922
	Amount of Cash Discount allowed on settlement of account for month of July 1902 as recorded in Cash Book & folio 77592 bid inclusive			
415	Bates Acct. Rec.	5922		

Orange N.J. July 1902

113	Individuals & Cos	31	54108.64
✓	To Sundries		
	Amount of Sales for month of July 1902 as recorded in Abstract of Sales folios 245 to 253 both inclusive to be credited as follows:		
168	General Expense	226.26	
153	Sales	53882.38	
✓	Sundries	31	
113	To Individuals & Cos	60157.45	
	Amount of Disbursements for month of July as recorded in Register of Disbursements folios 315 to 37 both inclusive chargeable to		
168	General Expense	16392.89	
119	Machinery & Tools	2502.75	
31	Furniture & Fixtures	35.00	
177	Manufacturing	40214.27	
113	Individuals & Companies	12.56	
✓	Sundries	31	
177	To Manufacturing	10429.45	
	Amount of Material Transfers for month of July 1902 as recorded in Register of Disbursements folios 37 chargeable to		
168	General Expense	2999.27	
177	Manufacturing	12420.68	
168	General Expense	31	
31	To Furniture & Fixtures	35.00	
	Transferring amount of Accs. Payable Voucher #1065 from P & Co to B & Co.	35.00	

Orange N.J. August 1902

113	Individuals & Cos	5	300	300
113	To Individuals & Cos			
	Transferring from P & Co Ledger into Notes Accs. Rec. Ledger amount of \$200 June 21th deducted in settlement this day			
2	W. A. Force & Co	200		
45	Notes Accs. Rec	200		
1/2	W. A. Force & Co	200		
102	Individuals & Cos	12	1063.21	1063.21
123	Notes Payable			
	Gave this day our Note at 3 months payable to Union National Bank Newark N.J. Interest added @ 6% per annum balance of payment on 3 machine			
71	Brown & Sharpe Mfg Co	1063.21		
165	Dividend	22	6018.00	6018.00
163	To Individuals & Cos			
	For a dividend of 25¢ per share on all stock of the Company entitled thereto payable Aug 20 1902 as per resolution of Board of Directors held at Edison Laboratory this day			
102	Chas. Ditzel	248.44 shares 1015	310.55	
100	Wm. A. Edison	50	57.50	
101	W. B. Leachinbrook	250	312.50	
1	Samuel Insull	5	6.25	
100	Original Graphophone Co	1430	1787.50	
1	Wm. A. Edison	2572.21	2590.26	
100	J. F. Randolph	10	12.50	
6	W. C. Gilmore	5	6.25	
102	J. C. Charles	5	6.25	
100	J. M. Chesney	5	6.25	
102	J. W. Cutting	436.75	545.94	
102	Walter Cutting	347	396.25	
		44114.40	6018.00	

Orange N.J. August 1902

169	General Expense	20	206.00
177	To Manufacturing		206.00
	To correct distribution of Material Transfer		
	Truck 7109, above amount being charged		
	to Material Sales in error		
100	New Material Sales	206.00	
183	Individuals & Co		
173	To Individuals & Co		
	Transferring Inv to firm & Co's Ledger		
	into Sales Accts Rec Ledger		
172	To & Recd Mfg Co	49	
445	Sales Accts Rec	49	
43	To & Recd Mfg Co	49	
183	Individuals & Co		
173	To Individuals & Co		
	Received this day Note payable one		
	month after date to Merchants National		
	Bank New Haven Conn in settlement		
	of account to 1/2 20% interest added		
445	Sales Accts Rec	21.17	
101	Sales Notes Receivable	21.17	
445	Sales Accts Rec	21.17	
1	Valentine Stamp Co	21.17	
183	Individuals & Co		
169	To General Expense		
	Interest added to Note Valentine Stamp Co		
	dated 7/1/1902		
445	Sales Accts Rec	20	
1	Valentine Stamp Co	20	
183	Individuals & Co		
173	To Individuals & Co		
	To write off balance due same being		
	uncollectable		
445	Sales Accts Rec	6.67	
445	Sales Suspense	6.67	
445	Sales Accts Rec	6.67	
212	American Typewriter Exchange	6.67	

Orange N.J. August 1902

169	General Expense	20	281
183	To Individuals & Co		281
	To allow 2% Cash Discount on Net purchases		
	for July 1902		
	Gross purchases	141.12	
	Credits	70	
	Net purchases	141.042	
445	Sales Accts Rec	2.81	
72	National Phone Co Foreign Dept	2.81	
183	Individuals & Co		
173	To Individuals & Co		
	Transferring amount refunded by Eng		
	Office Aug 19, 1902 from Dr Co's Ledger into		
	Sales Accts Rec Ledger		
445	Sales Accts Rec	60	
203	Engineering Office	60	
204	Engineering Office	60	
169	General Expense	30	
173	To Individuals & Co		
	Transferring amount of Sales Extra Expense		
	for month of August 1902 from Sales Accts		
	Rec Ledger into General Ledger		
445	Sales Accts Rec	125.00	
72	Sales Extra Expenses	125.00	
183	Individuals & Co		
169	To General Expense		
	Amount of Cash Discount deducted in		
	settlement of accounts during August		
	as recorded in Cash Recd 5 folios 92.6.98		
169	General Expense	30	
173	To Individuals & Co		
	Amount of Cash Discount allowed in		
	settlement of accounts during August as		
	recorded in Cash Recd 5 folios 92.6.98 inclusive		
445	Sales Accts Rec	20.96	

Orange N.J. August 1902.

154	Individuals & Co	30	10,835.48
✓	To Sundries		
	Amount of Sales for month of August 1902 as recorded in Abstract of Sales from 354 to 361 both inclusive to be credited as follows		
169	General Expenses	13,327	
177	Manufacturing	624	
153	Sales	1,082,145.7	
✓	Sundries	30	
154	To Individuals & Co	747,84.04	
	Amount of Reimbursements rendered during August 1902 as recorded in Register of Reimbursements from 39 to 45 both inclusive chargeable to		
169	General Expenses	152,09.41	
159	Machinery & Tools	13,32.00	
177	Manufacturing	66,207.89	
154	Individuals & Companies	346.54	
✓	Sundries	30	
177	To Manufacturing	152,81.48	
	Amount of Materials transferred for month of August 1902 as recorded in Register of Reimbursements from 45 to 48 chargeable to		
169	General Expenses	553,6.92	
177	Manufacturing	127,44.48	
159	Don & Interest	30	
156	To Unpaid Bond Interest	352,50.00	
	Amount due on Coupon Series #10 but unclaimed and unpaid Aug 30, 1902 and subject to demand	352,50.00	
	Amount Series 7500.00 paid 3975.00		

Orange N.J. September 1902.

154	Individuals & Co	2	1000.00	1000.00
123	To Notes Payable			
	Issue this day our Note @ 10 months payable Jan 2, 1903 @ Union National Bank Newark in part renewal of our Note dated Apr 28 1902 due this day With interest @ 5% per annum			
1	Samuel Small	1000.00		
154	Individuals & Co	11	1,872	1,872
154	To Individuals & Co			
	Transferring amount of Cash credited to account of Community Mfg Co Aug 6-1902 to account of R. A. Wilson			
4	Dates Accts Rec	18.72		
100	Community Mfg Co	18.72		
4	Dates Accts Rec	18.72		
217	R. A. Wilson	18.72		
169	General Expenses	11	57	57
154	To Individuals & Co			
	To allow 2% Cash Discount on following accounts not deducted at time of settlement			
4	Dates Accts Rec	51		
210	Chamager	13		
217	R. A. Wilson	38		
154	Individuals & Co	13	48	48
154	To Individuals & Co			
	Transferring amount of invoice #1 from Dr. C. C. Leger into Sales Accts Rec Ledger			
100	Tower Mfg & Novelty Co	48		
145	Dates Accts Rec	48		
217	Tower Mfg & Novelty Co	48		
154	Individuals & Co	19	1000.00	1000.00
123	To Notes Payable			
	Accepted Draft this day payable 30 days after date @ Union National Bank Newark in settlement of account to Sept 24, 1902 With interest			
5	American Oil & Supply Co	1000.00		

Orange N.J. September 1902

## 151 Individuals &amp; Co

To Individuals &amp; Co

Transferring amount paid through Petty Cash from N Co Ledger into Bates Accts Rec Ledger

4 Bates Accts Rec 34

101 N Co Miller &amp; Co 34

201 N Co Miller &amp; Co 34

## 152 Individuals &amp; Co

To Individuals &amp; Co

Transfer to correct error in posting bill

75% - 7/5-1902

415 Bates Accts Rec 3.50

217 N Co Horn Bros 3.50

415 Bates Accts Rec 3.50

217 N Co Horn Bros Co 3.50

## 153 General Expense

To Individuals &amp; Co

To allow 2% Cash Discount on Net purchases

for month of August 1902 not previously deducted

Gross purchases 197.22

Credits 10.87

Net purchases 186.35

415 Bates Accts Rec 3.73

1 National Phone Co Foreign Dept 3.73

## 154 Individuals &amp; Co

To Individuals &amp; Co

Transferring amount of Service 7/5-1902

7/5-30 from N Co Ledger into Bates Accts Rec Ledger

12 S D Buck Mfg Co 55

415 Bates Accts Rec 55

1 S D Buck Mfg Co 55

Orange N.J. September 1902

## 114 Individuals &amp; Co

To Individuals &amp; Co

Transferring amount paid through Petty Cash Sept 16-1902 from N Co Ledger into Bates Accts Rec Ledger

4 Bates Accts Rec 60

101 Michert &amp; Gardner 60

105 Michert &amp; Gardner 60

## 155 General Expense

To Individuals &amp; Co

Transferring amount of Bates Extra Expense

for month of September 1902 from Bates

Accts Rec Ledger into General Ledger

4 Bates Accts Rec 100.00

2 Bates Extra Expense 30 100.00

## 156 General Expense

To Individuals &amp; Co

Amount of Cash Discount allowed in

settlement of accounts during Sept 1902

as recorded in Cash Book 3 folios 99.6

101 both inclusive

4 Bates Accts Rec 62.68

## 157 Individuals &amp; Co

To Sundries

Amount of Sales for month of September

1902 as recorded in Abstract of Sales folio

266 to 273 both inclusive to be credited to

158 General Expense

159 Sales

Orange N.J. September 1902

20		
✓ <u>Summaries</u>		
188	<u>To Individuals &amp; Cos</u>	71423.42
Amount of Reimbursement Vouchered during month of September 1902 as recorded in Register of Reimbursements folios 47 to 53, both inclusive chargeable to.		
169	<u>General Expense</u>	19366.96
169	<u>Machinery &amp; Tools</u>	27500
177	<u>Manufacturing</u>	59757.11
188	<u>Individuals &amp; Companies</u>	2935
30		
✓ <u>Summaries</u>		
177	<u>To Manufacturing</u>	21276.96
Amount of Material Transfers during month of September 1902 as recorded in Register of Reimbursements folio 53 chargeable to.		
169	<u>General Expense</u>	18422.6
177	<u>Manufacturing</u>	16434.70

Orange N.J. October 1902

8		
184	<u>Individuals &amp; Cos</u>	310
184	<u>To Individuals &amp; Cos</u>	310
Transferring amount of Attorney fees in collecting balance due from Stirling Chuggy Co. from Dr. Cash Ledger into Date Accts. Rec. Ledger		
100	<u>Associated Merchants of N.Y.</u>	310
445	<u>Date Accts. Rec.</u>	310
225	<u>Stirling Chuggy Co.</u>	310
10		
56	<u>Notes Receivable</u>	150000
184	<u>To Individuals &amp; Cos</u>	150000
Received this day Note at 6 months payable at Union National Bank Newark N.J. to apply on account.		
296	<u>National Phonograph Co.</u>	1500.00
32		
184	<u>Individuals &amp; Cos</u>	1668
184	<u>To Individuals &amp; Cos</u>	1668
Transferring amount paid through City Cash this day from Nat'l Phone Co. books to Edison Phone Mfg. books.		
102	<u>Mealey &amp; Co.</u>	1668
796	<u>National Phonograph Co.</u>	1668
32		
77	<u>Manufacturing</u>	805
169	<u>To General Expense</u>	805
To correct distribution of Account Payable Voucher #216 Sept. 1902 charged to General Expense in error.		
156	<u>Raw Material</u>	805
22		
56	<u>Notes Receivable</u>	170000
184	<u>To Individuals &amp; Cos</u>	170000
Received this day Note payable at Franklin National Bank Phila. Pa. City \$17000		
reversing note due Oct 20 1902		
5	<u>Edison Portland Cement Co.</u>	1700.00

Orange NJ October 1902

56	Notes Receivable	23	1500.00	
185	To Individuals & Co		1500.00	
	Received this day Note at four months payable at Union National Bank Newark NJ applying on account			
706	National Phonograph Co	1500.00		
		20		
188	Individuals & Co		146.7	
189	To Individuals & Co		146.7	
	Transfer to correct error in entering B.O. 2581 in Abstract of Sales Sept 30-1902.			
5	Edison Portland Cement Co	146.7		
711	Edison Mfg Co	146.7		
		26		
169	General Expenses		312	
184	To Individuals & Co		312	
	To allow 2% Cash Discount on Feb purchases during September 1902 amounting to 153.17			
45	Bates Accts Rec	312		
1	National Phon Co Foreign Dept	312		
		20		
184	Individuals & Co		271	
185	To Individuals & Co		271	
	Transferring from W Co Ledger into Bates Accts Rec Ledger the following items			
12	J D Bush Mfg Co	98		
2	W L Force Co	150		
100	Tower Mfg & Moly Co	50		
44	Bates Accts Rec	276		
13	J D Bush Mfg Co	98		
1	W L Force Co	150		
70	Tower Mfg & Moly Co	50		
		30		
169	General Expenses		125.00	
184	To Individuals & Co		125.00	
	Transferring amount of Bates Extra Expenses for month of October 1902 from Bates Accts Rec Ledger into General Ledger			
45	Bates Accts Rec	125.00		
184	Bates Extra Expenses	125.00		

Orange NJ October 1902

188	Individuals & Co	31		
189	To Individuals & Co		18.14	
	Transferring from St Co Ledger into Bates Accts Rec Ledger the following items		18.14	
201	Orange Mfg Co	11.55	5.13	17.18
100	Tower Mfg & Moly Co	96		
44	Bates Accts Rec	96		
1	Orange Mfg Co	18.14		
70	Tower Mfg & Moly Co	17.18		
		96		
169	General Expenses	31		
185	To Individuals & Co		66.05	
	Amount of Cash Discount allowed in settlement of Bates Accts Receivable during month of October 1902 as recorded in Cash Book			
45	Bates Accts Rec	66.05		
		31		
188	Individuals & Co		1004.76.78	
	To Sundries			
	Amount of Sales for month of October 1902 as recorded in Abstract of Sales, folios 277 to 314 both inclusive to be credited as follows			
169	General Expenses		255.91	
185	Sales		1002.20.27	
177	Manufacturing		50	
		31		
188	Sundries			
189	To Individuals & Co		696.39.53	
	Amount of Disbursements recorded during month of October 1902 as recorded in Register of Disbursements, folios 55 to 61 both inclusive chargeable to			
169	General Expenses		1664.4.7	
189	Machinery & Tools		9.5.48	
177	Manufacturing		57.991.55	
188	Individuals & Companies		24.15	



Orange N.J. October 1902

✓	Summary	34	
177	To Manufacturing		22709.28
	Amount of Material Transfers during month of October 1902 as recorded in Register of Disbursements folio 62 charged to		
169	General Expense	3445.21	
177	Manufacturing	17264.07	

Orange N.J. November 1902

184	Individuals & Cos	5	
173	To Sales		765
	To charge Bates Numbering Machine Co with amount of Commission dues on machines sold to R.A. Childs Columbia S.C. by these parties		765
46	Bates Accts Rec	7.65	
21	Bates Numbering Machine Co	7.65	
66	Bates Mdx	765	
184	Individuals & Cos	7	
184	To Individuals & Cos		87
	To write off 50% of balance due some being uncollectable		87
46	Bates Accts Rec	.87	
3	Bates Suspense	.87	
46	Bates Accts Rec	.87	
200	C.W. Varney & Co	.87	
184	Individuals & Cos	15	
184	To Individuals & Cos		2035
	Received this day Note at one month payable at Merchants National Bank New Haven Conn. in settlement of account to Nov 1st.		2035
46	Bates Accts Rec	2035	
101	Bates Notes Rec	2035	
46	Bates Accts Rec	2035	
1	Valentine Stamp Co	2035	
184	Individuals & Cos	15	
169	To General Expense		11
	Interest added to Note from date		11
46	Bates Accts Rec	.11	
1	Valentine Stamp Co	11	

Orange, N.J. November 1902

114	Individuals & Co	3	1000.00	
123	To Notes Payable		1000.00	
	Bore this day our Note payable Mar 3-1902 at Union National Bank, Newark, N.J. renewing our Note of July 3-1902 due this day with interest @ 5% per annum			
1	Samuel Insull	1000.00		
165	Dividends	30	601.80	
165	To Individuals & Co		601.80	
	For a dividend of \$2.25 per share on all stock of the Company entitled thereto declared payable on Nov 26 1902 as per resolution of the Board of Directors at a special meeting held at the Edison Laboratory West Orange, N.J. Nov 17-1902			
100	Chas. Batschelor	248.44	50.05	
100	M <sup>r</sup> Thos A. Edison	30	57.50	
101	N.B. Wychniowski	250	312.50	
1	Samuel Insull	5	6.25	
100	International Graphophone Co		1717.50	
110	Thos A. Edison	2072.21	2590.76	
100	John J. Randolph	10	12.50	
8	W.C. Gilmore	5	6.25	
100	John C. Kearney	5	6.25	
100	J. P. M. Chesney	5	6.25	
100	Walter Cuthing	317	594.25	
100	Garret Wadling	446.77	245.74	
		4414.40	6018.00	
169	General Expense	29	100.00	
169	To Individuals & Co		100.00	
	To transfer amount of Bates Extra Expense for month of November from Bates Accts Rec Ledger into General Ledger			
116	Bates Accts Rec	100.00		
72	Bates Extra Expense	100.00		

Orange, N.J. November 1902

114	Individuals & Co	29		
169	To General Expense		588	588
	Amount of Cash Discount deducted on settlement of Accounts Payable during month of November as recorded in Cash Recd & folios 111 to 117 both inclusive			
149	General Expense	29	6517	
184	To Individuals & Co		6517	
	Amount of Cash Discount allowed in settlement of Bates Accounts within ten days as recorded in Cash Recd & folios 111 to 117 both inclusive			
116	Bates Accts Rec	6517		
184	Individuals & Co	29	93995.16	
	To Sundries			
	Amount of Sales for month of November 1902 as recorded in Abstract of Sales folios 281 to 294 both inclusive to be credited to			
169	General Expense		250.00	
163	Sales		93740.73	
77	Manufacturing		60	
✓	Sundries	29		
184	To Individuals & Co		77000.05	
	Amount of Disbursements vouchers during month of November 1902 as recorded in Register of Disbursements folios 63 to 69 both inclusive chargeable to			
169	General Expense		15263.61	
189	Machinery & Tools		370.50	
26	Real Estate & Buildings		192.2	
177	Manufacturing		61291.61	
184	Individuals & Companies		31.91	

Orange N.J. November 1902

29	
✓ Sundries	
177 To Manufacturing	20687.81
Amount of Material Transfers for month	
November 1902 as recorded in Register	
of Disbursement folio 69 chargeable to	
169 General Expense	5744.06
177 Manufacturing	15643.82

Orange N.J. December 1902

26	
184 Individuals & Cos	13.58
184 To Individuals & Cos	13.58
To transfer amount of Accounts Payable	
Vouchers # 159 Oct 1902 & # 223 Nov 1902	
from account of A. Nelson to account of	
F. D. Lorton	
102 A. Nelson	13.58
103 F. D. Lorton	13.58
24	
184 Individuals & Cos	14.20
184 To Individuals & Cos	14.20
Transfer to correct error in posting Cash	
item Oct 21-1902	
103 F. D. Lorton	14.20
102 A. Nelson	14.20
31	
64 Allowance for Depreciation	462.00
26 To Real Estate & Buildings	462.00
To write off the cost of Building "6" which	
has been torn down	
31	
184 Individuals & Cos	8.00
184 To Individuals & Cos	8.00
Transferring amount paid through City	
Cash on account of American Type	
Foundry Co's duplicate payment from	
State Ledger into State Accts Rec Ledger	
446 State Accts Rec	8.00
10 American Type Foundry Co	8.00
203 American Type Foundry Co	8.00
31	
169 General Expense	100.00
184 To Individuals & Cos	100.00
Transferring amount of State Extra	
Expense for month of December 1902	
from State Accts Rec Ledger into General	
Ledger	
446 State Accts Rec	100.00
72 State Extra Expense	100.00

Orange, N.J. December 1902.

169	General Expense	31	73.53
171	To Individuals & Co.		73.53
	Amount of Cash Discount allowed in prompt settlement of Sales Accts Dec during current month as recorded in Cash Book & folios 111 to 124 both inclusive		73.53
176	Sales Accts Dec		
174	Individuals & Co.	31	21.19
169	To General Expense		21.19
	Amount of Cash Discount deducted in settlement of Accounts Payable during current month as recorded in Cash Book & folios 111 to 124 both inclusive		
165	Individuals & Co.	31	100,357.60
	To Sundries		
	Amount of Sales for month of December 1902 as recorded in Abstract of Sales folios 296 to 305 both inclusive to be credited to		
169	General Expense		191.92
173	Sales		100,159.58
177	Manufacturing		612
	31		
✓ Sundries			
185	To Individuals & Co.		102,571.79
	Amount of Disbursements vouchers during month of December 1902 as recorded in Register of Disbursements folios 71 to 80 both inclusive chargeable to		
169	General Expense		2,193.437
189	Machinery & Tools		560.50
26	Real Estate & Buildings		551.56
177	Manufacturing		77,096.11
185	Individuals & Companies		151.25

Orange, N.J. December 1902.

✓ Sundries	31	
177	To Manufacturing	35,516.13
	Amount of Material Transfers for month of December 1902 as recorded in Register of Disbursements folio 80 chargeable to	
169	General Expense	588.63
26	Real Estate & Buildings	190.8
177	Manufacturing	19,657.42
	31	
✓ Sundries		

Orange N.J. January 1903.

155 Individuals &amp; Co

Received this day Note to 30 days  
payable to Merchants National Bank  
New Haven Conn in settlement of 4/6  
to Jan 1st 1903.

4/6 Bates Accts Rec 299.4

101 Bates Notes Receivable 299.4

4/6 Bates Accts Rec 299.4

1 Valentine Stamp Co 299.4

155 Individuals &amp; Co

To General Expense

Amount of Interest added to Note given  
date from Valentine Stamp Co

4/6 Bates Accts Rec .26

1 Valentine Stamp Co .26

155 Individuals &amp; Co

To Individuals & Co

Transferring amount of Cash received  
3/4-10/11 from Schippers Bros) to credit  
of National Photograph Co Foreign Dept

4/6 Bates Accts Rec 8.40

228 Schippers Bros 8.40

4/6 Bates Accts Rec 8.40

1/2 National Photo Co Foreign Dept 8.40

155 General Expense

To Individuals & Co

To transfer amount of Bates Extra Expense  
for month of January 1903 from Bates  
Accts Rec Ledger into General Ledger

4/6 Bates Accts Rec 125.00

7/6 Bates Extra Expense 125.00

155 Manufacturing

To General Expense

To correct distribution of Account Payable Vouchers  
260. 10/24 & 3/25 1/23 dated Dec 21/1902 which  
were charged to B.C. instead of Raw Material

155 Raw Material 125.59

299.4

299.4

26

26

8.40

8.40

125.00

125.00

125.59

125.59

Orange N.J. January 1903.

155 Individuals &amp; Co

To General Expense

Amount of Cash Discount deducted in  
settlement of Accounts Payable for  
month of January 1903. as recorded in  
Cash Book 3 folios 125 to 126 both inclusive

155 General Expense

To Individuals & Co

Amount of Cash Discount allowed in  
prompt settlement of Bates Accts Receivable  
for month of January 1903 as recorded  
in Cash Book 5 folios 125 to 126 both  
inclusive

4/6 Bates Accts Rec 52.61

64 Allowances for Depreciation

To Real Estate & Building

Private Off Cost of Old Building "7" same  
having been demolished

155 Individuals &amp; Co

To Sundries

Amount of Sales for month of January  
1903 as recorded in Abstract of Sales  
folios 310 to 314 both inclusive to be  
credited to

155 General Expense

Sales

Manufacturing

Sundries

To Individuals & Co

Amount of Disbursements incurred during Jan  
1903 as recorded in Register of Disbursements  
folios 816 to 818 both inclusive chargeable to

155 General Expense

Real Estate Building

Manufacturing

Individuals & Co

60.5

60.5

52.61

52.61

400.00

400.00

88740.53

88740.53

2242.3

2242.3

2422

2422

77458.16

77458.16

10623.11

10623.11

50676.27

50676.27

29.68

29.68

Orange N.J. January 1903

122		231		232
177	Supplies			
	To Manufacturing			
	Amount of Material Transfers for month			
	of January 1903 as recorded in Register of			
	Reimbursements folio 11 chargeable to			
174	General Expense	5527.20		
26	Real Estate Buildings	21.65		
177	Manufacturing	10361.47		

2394732

Orange N.J. February 1903

123		12		13
115	Individuals & Co.			
115	To Individuals & Co.			
	Transfer to balance accounts			
416	Bates Accts Rec	2.00		
211	General Reap	25		
211	J. Mott & Son	175		
416	Bates Accts Rec	2.00		
202	E. M. Johnson	55		
220	J. Mott & Son	175		
115	Individuals & Co.			
115	To Individuals & Co.			
	To write off indebtedness of N. B. Bennett & Co.			
	same being uncollectable per instruction			
	of Mr. Culhouse			
416	Bates Accts Rec	2.30		
3	Bates Suspense	2.30		
416	Bates Accts Rec	2.30		
210	N. B. Bennett & Co.	2.30		
		2.0		
165	Dividend			
165	To Individuals & Co.			
	For a dividend of 1.25 per share on all the			
	stock of the Company entitled thereto as per			
	resolution of the Board of Directors at a special			
	meeting held at the Edison Laboratory February 1903			
	declared payable Feb. 20 1903			
102	Chas. Batchelor	242.44	310.55	
100	Wm. Shaw Edison	50	57.50	
101	N. B. Auchincloss	250	312.50	
1	Samuel Insull	5	6.25	
100	International Graphophone Co.	143.0	178.75	
1	Shaw & Edison	2572.21	2590.26	
100	John F. Randolph	10	12.50	
8	E. M. Johnson	5	6.25	
102	John C. Stegler	5	6.25	
100	J. F. McHenry	5	6.25	
102	Wm. Carter Cutting	317	396.25	
102	Jas. W. Cutting	436.75	545.94	
		4814.40	6018.00	

Orange N.J. February 1903

146	Notes Receivable	24	1750.00	
145	To Individuals & Cos.		1750.00	
	Note received this day payable June 29 1903 at Franklin National Bank Phila remaining note of Oct 22 1902			
5	Edison Portland Cement Co	28	1750.00	
145	Individuals & Cos.	28	22.51	
145	To Individuals & Cos.		22.51	
	Transfer to correct error in posting Bill 11200 & 11205 Dec 21 1902			
446	Bates Accts Rec	22.51		
715	Towen Mfg & Mouldy Co	22.51		
46	Bates Accts Rec	22.51		
3	Taylor Bros	22.51		
145	Individuals & Cos.	28	250	
145	To Individuals & Cos.		250	
	To write off balance due same being uncollectable as per instructions of M. L. L. L.			
46	Bates Accts Rec	250		
3	Bates Suspense	250		
46	Bates Accts Rec	250		
212	Amos Advertising Agency	250		
70	General Expense	28	100.00	
145	To Individuals & Cos.		100.00	
	To transfer amount of Bates Extra Expense for current month from Bates Accts Rec			
446	Bates Accts Rec	100.00		
70	Bates Extra Expense	100.00		
145	Individuals & Cos.	28	487.4	
145	To General Expense		487.4	
	Amount of Cash Discount deducted in settlement of Accounts Payable during current month as recorded in Cash Book 45 folios 131 to 136 both inclusive			

Orange N.J. February 1903

70	General Expense	28		
145	To Individuals & Cos.		627.9	627.9
	Amount of Cash Discount allowed in prompt settlement of Bates Accounts Receivable during current month as recorded in Cash Book 45 folios 131 to 136 both inclusive			
446	Bates Accts Receivable	627.9		
145	Individuals & Cos.	28	174.9	174.9
145	To Individuals & Cos.		174.9	
	To write off sundry debit and credit balances appearing in the following accounts in Bates Accts Receivable Ledger			
446	Bates Accts Rec	174.9		
110	Brown & Son	75		
224	Brown & Birmingham	25		
219	Conger Kahn & Gibbs	12		
207	C. Francis	52		
220	C. M. Jamison	16		
216	G. H. Stanley	72		
217	C. J. Hatch	70		
217	A. V. Westmark	119.3		
217	C. A. Fitcher	10		
207	J. Louis Larram	114		
180	Maxwell & Co	21		
216	Murison & Wright	27		
101	M. M. Tamara	200		
216	C. E. Workman	10		
213	H. H. Martin	67		
222	J. D. Clarkeson	03		
223	Burnet Woodin Co	25		
105	Gunn & Co	05		
202	Illinois State Agents	06		
207	H. H. Newton	26		
211	Reed & Jones	09		
21	Boyer & Co	33		
446	Bates Suspense	174.9		
446	Bates Accts Rec	174.9		

Orange N.J. February 1903

153	Sales	28	104535	
153	To Sales		104535	
	To correct distribution of bills 25732 90810 4 * 25732 = 136.55 which should have been credited to Misc instead of Wax 9c			
8	Wax	104535		
26	Misc Order	104535		
	28			
170	General Expenses	28	14548	
177	To Manufacturing		14548	
	Transferring amount of Labor & Material on the following Special Shop Orders from Misc to Mfg:			
	No 730 44078	772 - 372 = 818. 100		
141	Misc Order	14548		
	28			
140	Bond Interest	28	5000	
136	To Unpaid Bond Interest		5000	
	Amount of Bond Interest due on Coupon Series 711 remaining unclaimed and unpaid July 28-1903 and subject to demand			
	Amount of series 750000			
	Paid 74501.0			
	28			
145	Individuals & Co.	28	791608	
	To Sundries			
	Amount of Sales for month of February 1903 as recorded in Abstract of Sales folio 326.325 both inclusive to be credited as follows			
170	General Expenses			
153	Sales			
177	Manufacturing	28	351232	
8	Profit & Loss		7352941	
185	To Individuals & Co.		3445	
	To write off amount of Bates Expenses for fiscal year ending July 27-1903			
46	Bates Acct. Rec.	350.0		
3	Bates Expenses	35.00		

Orange N.J. February 1903

177	Manufacturing	28		
177	To Manufacturing		16891	16891
	To transfer amount of Labor & Material charged against Shop Order 73526 from Miscellaneous to Cabinet account			
136	Cabinet	16891		
141	Miscellaneous	16891		
	28			
145	Individuals & Co.	28	608766	608766
135	To Individuals & Co.			
	Transferring balance standing to the credit of F. A. Edison July 27-1903 to the account of National Phonograph Co.			
141	F. A. Edison	608766		
7112	National Phonograph Co.	608766		
	28			
✓	Sundries			
145	To Individuals & Co.		8294508	
	Amount of Disbursements vouchered during month of February 1903 as recorded in Register of Disbursements folios 90 to 97 both inclusive charged to			
170	General Expenses		2396420	
149	Machinery & Tools		112500	
26	Real Estate & Buildings		500524	
177	Manufacturing		5108710	
145	Individuals & Co.		21224	
	28			
✓	Sundries			
177	To Manufacturing		1966952	
	Amount of Material transfers for month of February 1903 as recorded in Register of Disbursements folio 97 charged to			
170	General Expenses		476098	
26	Real Estate & Buildings		2276	
177	Manufacturing		1406378	



Orange N.J. February 1903

171	Manufacturing	26	201.56	
171	To General Expenses		201.56	
	To correct distribution of Acetylene Machine			
	*274. Feb'y 21, 1903. changed to Rent Expense			
	should be Raw Material			
181	Raw Material	201.56		
171	Manufacturing	28	354.86	
171	To Manufacturing		354.86	
	To write off the following amounts to			
	make Raw Material & Wapanning equal			
	inventory			
122	Wapanning	9012.48		
156	Raw Material	1657.62		
17	Phonograph	354.86		
178	Manufacturing	28		
170	To General Expenses		14302.20	
	To transfer amount standing to the credit			
	of Box Factory to the credit of General Expenses			
134	Box Factory	14302.20		
171	Manufacturing	28	8577.57	
170	To General Expenses		8577.57	
	To transfer expense directly chargeable to			
	Natus Mfg Co business			
26	Acetylene Machine	8577.57		
8	Profit & Loss	28		
	To Sundries		39072.00	
	To write off the following accounts			
160	Rent Interest		317.10	
161	Dividend		1500.00	
		28	24672.00	
151	Sales			
151	To Sales		7613.57	
	To transfer balance to credit of Scrap Ac			
	to Phonograph Ac		7613.57	
122	Scrap	7613.57		
2	Phonograph	7613.57		

Orange N.J. February 1903

171	Manufacturing	28		
170	To General Expenses		20812.841	
	To distribute pro rata General Expense and		20812.841	
	Depreciation over the following accounts			
17	Phonographs		112,917.80	
28	Acetylene Machine		8667.91	
154	Map		33171.80	
141	Miscellaneous		3720.43	
151	Spring Motor		3774.14	
131	Tan Motor		2201.66	
159	Proj. Kinetoscope		34136.14	
156	Cabinet		30805.01	
153	Edison Motor		8019.52	
154	Sales	28		
171	To Manufacturing		83544.902	
	To transfer cost of Sales of the following			
	accounts for fiscal year ending Feb'y 28-03			
2	Phonograph Ac	423,317.01		17
14	Acetylene Machine	44616.97		28
66	Box Mdee	1238.04		117
8	Map	141658.03		154
26	Miscellaneous	15947.35		141
44	Spring Motor	14257.29		151
106	Tan Motor	4364.68		131
38	Proj. Kinetoscope	12335.22		159
56	Raw Material Sales	2665.14		104
69	Cabinet	113064.53		156
77	Edison Motor	52907.29		153

Orange, N.J. February 28-1903

104	Sale	28	101918.94	
8	To Profit & Loss		101918.94	
	For profits realized on the following accounts during fiscal year ending Feb'y 28-1903.			
2	Photographs	64928.97		
14	Auto Thumbing Machines	22001.74		
66	Bates Merchandise	1199.61		
8	Max	32385.11		
26	Miscellaneous	668.35		
104	Spring Motor	1018.38		
106	Sam Motor	559.19		
38	Long Microscope	2462.82		
56	Raw Material Sales	600.44		
69	Cabinet	6102.11		
77	Edison Motor	11541.22		
8	Profit & Loss	28		
64	To Allowance for Depreciation		86200	86200
	To write off amount of Depreciation on Real Estate Buildings during fiscal year ending Feb'y 28-1903 owing to the destruction of Building #6 262.52 & Building #7 400.00			
83	Bates Mfg Co	28		
145	To Individuals & Co		14166.34	14166.34
	To transfer above amount from Dr Co Ledger into General Ledger			
203	Bates Mfg Co		14166.34	

Orange N.J. March 1903

		\$0	
✓	Individuals & Cos.		
	To Sundries		9572.20
Amount of Sales for month of March 1903 as recorded in Abstract of Sales folios 329 to 333 both inclusive to be credited to			
170	General Expense		15866
154	Sales		95564.64
		\$0	
✓	Sundries		
165	To Individuals & Cos.		59676.78
Amount of Reimbursement vouchers during month of March 1903 as recorded in Register of Reimbursements folios 99 to 104 both inclusive chargeable to			
170	General Expense		2041.71
27	Real Estate Buildings		474
178	Manufacturing		69225.31
165	Individuals & Companies		5495
		\$0	
✓	Sundries		
178	To Manufacturing		24270.32
Material transfers during month of March 1903 as recorded in Register of Reimbursements folios 104 chargeable to			
170	General Expense		534.83
27	Real Estate Buildings		1612
178	Manufacturing		18946.22

Orange N.J. March 1903.

115	Individuals & Co.	35	38.00	
115	To Individuals & Co.		38.00	
	Transferring amount of check Bates \$35.00 drawn on N.J. Trust Bank from Bates Accts Rec. Ledger into Dr Co Ledger			
7	J.H. Blackstone	31.00		
46	Bates Accts Rec	37.00		
100	J.H. Blackstone	37.00		
115	Individuals & Co.	27	27.73	
115	To Individuals & Co.		27.73	
	Transferring amount of invoice \$25.00 from Dr Co Ledger into Bates Accts Rec Ledger			
100	Town Mfg & Novelty Co	27.73		
46	Bates Accts Rec	27.73		
275	Town Mfg & Novelty Co	27.73		
170	General Expense	31	81.57	
115	To Individuals & Co.		81.57	
	Amount of Cash Discount allowed on prompt settlement of Bates Accts Receivable during month of March 1903 as recorded in Cash Book & filed 137 to 142 inclusive			
46	Bates Accts Rec	81.57		
115	Individuals & Co.	31	98.74	
170	To General Expense		98.74	
	Amount of Cash Discount deducted on settlement of Acct Payable during month of March 1903 as recorded in Cash Book & filed 137 to 142 inclusive			
170	General Expense	31	100.00	
115	To Individuals & Co.		100.00	
	Transferring amount of Bates Extra Expense for month of March 1903 from Bates Accts Rec Ledger into General Ledger			
46	Bates Accts Rec	100.00		
275	Bates Extra Expense	100.00		

Orange N.J. April 1903

115	Individuals & Co.	10	45.00	
115	To Individuals & Co.		45.00	
	Transferring balance due from account of Roberts & Son to Associated Merchants of N.J. for collection			
46	Bates Accts Rec	45.00		
210	Associated Merchants of N.J.	45.00		
46	Bates Accts Rec	45.00		
2	Roberts & Son	45.00		
115	Individuals & Co.	10	112.5	
115	To Individuals & Co.		112.5	
	To write off 25% of balance due from Roberts & Son, we having accepted 75% of account in full settlement			
46	Bates Accts Rec	112.5		
3	Bates Suspense	11.25		
46	Bates Accts Rec	112.5		
210	Associated Merchants of N.J.	112.5		
115	Individuals & Co.	10	34.8	
115	To Individuals & Co.		34.8	
	Transferring amount of collection charges on our claim vs Roberts & Son			
104	Associated Merchants of N.J.	34.8		
46	Bates Accts Rec	34.8		
210	Associated Merchants of N.J.	34.8		
115	Individuals & Co.	15	257	
115	To Individuals & Co.		257	
	Transferring from Dr Co Ledger into Bates Accts Rec Ledger the following items			
2	W.A. Force & Co	150		
104	Town Mfg & Novelty Co	100		
46	Bates Accts Rec	257		
104	W.A. Force & Co	150		
2	Town Mfg & Novelty Co	107		

Orange NJ April 1903

101	Individuals & Co	30		
111	To Individuals & Co		175	175
	To credit off balance existing in account of Foreman House Dept			
46	Bates Accts Rec	175		
5	Bates Suspense	175		
46	Bates Accts Rec	175		
103	Foreman House Dept	175		
		30		
111	Individuals & Co		1067	1067
111	To Individuals & Co			
	Transfer to balance account			
46	Bates Accts Rec	1067		
4	Harvin Power	1067		
46	Bates Accts Rec	1067		
212	Power Locomotive & Ribbon Co	1067		
		30		
110	General Expenses		10000	10000
111	To Individuals & Co			
	Transferring amount of Bates Extra Expense for month of April 1903 from Bates Accts Rec Ledger into General Ledger			
46	Bates Accts Rec	10000		
5	Bates Extra Expense	10000		
		30		
185	Individuals & Co		10694	10694
170	To General Expenses			
	Amount of Cash Discount deducted in settlement of Accounts Payable during April 1903 as recorded in Cash Book & folios 142 to 149 both inclusive			
		30		
170	General Expenses		7495	7495
185	To Individuals & Co			
	Amount of Cash Discount allowed in prompt settlement of Bates Accts Rec during April 1903 as recorded in Cash Book & folios 142 to 149 both inclusive			
46	Bates Accts Rec	7495		

Orange NJ April 1903

111	Individuals & Co	30		
111	To Individuals & Co		7829	7829
	To correct error in posting. Voucher 201 Mar 31 1902			
4	Keuffel & Esser Co	7829		
6	J Henney	7829		
		30		
178	Manufacturing		400	400
170	To General Expenses			
	To correct distribution of Accts Payable Voucher 176 Mar 1902 changed to S. C. in error			
157	Raw Material	400		
		30		
189	Machinery & Tools		48425	48425
170	To General Expenses			
	To correct distribution of Accts Payable Voucher 425 Dec 1902 267 Feb 1903 & Mar 1. Changed to Maintenance of Tools in error			
		30		
185	Individuals & Co		2137	2137
185	To Individuals & Co			
	Transfer to correct the following entries in Abstract of Sales during March 1903.			
	Mar 27998 2.67 Chd Mfg Co. shd be Natl.			
	" 28012 M 12.16 " Natl. " Mfg Co.			
	" 28013 M 11.90 " " " "			
700	Edison Manufg Co	2137		
7115	National Phon Co	2137		
		30		
185	Individuals & Co		10403396	10403396
	To Sundries			
	Amount of Sales for month of April 1903 as recorded in Abstract of Sales.			
	Folios 237 to 244 both inclusive to be credited to			
170	General Expenses			
157	Sales			

13406  
10389990

Orange NJ April 1903

165	Surpluses	30	
	To Individuals & Co		14729.01
	Amount of Reimbursements vouchered for month of April 1903 as recorded in Register of Reimbursements folios 106.6-112 both inclusive is chargeable to		
170	General Expense	15406.21	
171	Manufacturing & Tools	743.00	
172	Real Estate & Buildings	2084.1	
173	Manufacturing	68267.19	
175	Individuals & Companies	10420.	
	30		
176	Surpluses		26781.83
	To Manufacturing		
	Amount of Material Transfers for month of April 1903 as recorded in Register of Reimbursements folio 112 chargeable to.		
170	General Expense	6884.75	
171	Real Estate & Buildings	118	
173	Manufacturing	19895.87	

Orange NJ May 1903

181	Individuals & Co	39	
186	To Individuals & Co		338
	To correct error in posting Nov. 23399 Apr. 27-1902		338
46	Bates Accts Rec	3.38	
46	H. Baird & Co	3.38	
46	Bates Accts Rec	3.38	
47	Haumgarten & Co	3.38	
	39		
170	General Expense		125.00
186	To Individuals & Co		125.00
	Transferring amount of Bates Extra Expense for month of May 1903 from Bates Accts Rec Ledger into General Ledger		
46	Bates Accts Rec	125.00	
47	Bates Extra Expense	125.00	
	20		
166	Dividend		6018.00
186	To Individuals & Co		6018.00
	For a dividend of $\frac{25}{100}$ per share on all stock of the Company entitled thereto declared payable May 20-1903 as per resolution of the Board of Directors at a Special Meeting held at the Edison Laboratory, New Orange NJ May 18, 1903.		
102	Chas. Batchelor	248.44	310.05
100	Mr. Jas Edison	50.	57.00
101	H. O. Auchincloss	350.	250.00
1	Samuel Knott	5.	6.25
100	International Graphophone Co.	1430.	1717.50
101	Mr. A. Edison	2072.21	2590.26
102	John F. Randolph	10.	12.50
8	W. G. Gilmore	5.	6.25
101	John C. Hearles	5.	6.25
104	W. M. Chesney	5.	6.25
102	Marion Cutting	317.	396.25
102	Jos. M. Cutting	256.75	525.94
		4814.40	6018.00

Orange N.J. May 1903.

29  
 116 Individuals & Co.  
 179 To General Expense  
 Amount of Cash Discount deducted  
 in prompt settlement of Accounts Payable  
 during May 1903 as recorded in Cash  
 Book 16 folios 167 both inclusive

19245

19248

29  
 170 General Expense  
 176 To Individuals & Co.  
 Amount of Cash Discount allowed in  
 settlement of Bate's Accounts Receivable  
 during month of May 1903 as recorded  
 in Cash Book 6 folios 167 both inclusive  
 176 Bate Accts Receivable 6958

6958

6958

29  
 176 Individuals & Co.  
 186 To Individuals & Co.  
 To correct error in posting Nov 4/03. 4416.3  
 176 Bate Accts Rec 1734  
 176 J Baumgarten Don 1734  
 176 Bate Accts Rec 1734  
 176 Baumgarten & Co 1734

1734

1734

29  
 176 Individuals & Co.  
 To Sundries  
 Amount of Sales for month of May 1903  
 as recorded in Abstract of Sales folios  
 341 to 350 both inclusive to be credited as  
 follows.

75981.88

170 General Expense  
 178 Manufacturing  
 180 Sales

184490

2244

75979.57

Orange N.J. May 1903.

29  
 ✓ Sundries  
 176 To Individuals & Co.  
 Amount of Disbursements vouchers during  
 month of May 1903 as recorded in  
 Register of Disbursements folios 115 to 120  
 both inclusive chargeable to

84695.05

170 General Expense  
 189 Machinery & Tools 16737.15  
 21 Real Estate & Buildings 75635  
 31 Furniture & Fixtures 259036  
 178 Manufacturing 200  
 186 Individuals & Companies 6416674  
 29 4375

✓ Sundries  
 178 To Manufacturing  
 Amount of Material Transfers for  
 month of May 1903 as recorded in  
 Register of Disbursements folios 120  
 chargeable as follows.

17267.17

170 General Expense  
 189 Machinery & Tools 354732  
 21 Real Estate & Buildings 183  
 178 Manufacturing 24455  
 1369357

Orange N.J. June 1903

14	Notes Receivable	8	1450.00
156	To Individuals & Cos	1450.00	
	Received this day note payable on the 29th of October 1903 at Franklin National Bank Phila.		
5	Edison Portland Cement Co	1850.00	
	To Individuals & Cos	3.0	
156	To Individuals & Cos	64.	
156	Transferring amount paid through Petty Cash from J. Cos Ledger into Bates Accts Rec Ledger		
46	Bates Accts Rec	64.	
201	William Stationery Co	34	
106	A. Coanagle	3.0	
201	William Stationery Co	34	
203	A. Coanagle	3.0	
	To Individuals & Cos	3.0	
156	To Individuals & Cos	16.	
156	Transferring amount of Cash Discount paid to W. Kimball June 9 1903 from J. Cos Ledger into Bates Accts Rec Ledger		
46	Bates Accts Rec	16.	
101	W. Kimball	16.	
201	W. Kimball	16.	
	To Individuals & Cos	3.0	
156	To Individuals & Cos	25.0	
	Transferring amount of Collecting Charge for Oxychlorine vs. P. M. Smiley from J. Cos Ledger into Bates Accts Rec Ledger		
101	Associated Merch. of N.Y.	25.0	
46	Bates Accts Rec	25.0	
110	Associated Merch. of N.Y.	25.0	

Orange N.J. June 1903

14	Individuals & Cos	3.0	
156	To Individuals & Cos	657.	
	Transferring amount due to attorneys account for collection		
46	Bates Accts Rec	654.	
110	Associated Merchants of N.Y.	6.54	
46	Bates Accts Rec	6.54	
101	P. M. Smiley	6.54	
	To Individuals & Cos	3.0	
156	To General Expense	302.78	
170	Amount of Cash Discount deducted in prompt settlement of Accounts Payable during June 1903 as recorded in Cash Book 6 folios 8 to 14 both inclusive	302.78	
	To General Expense	3.0	
170	To General Expense	56.65	
156	To Individuals & Cos	56.65	
	Amount of Cash Discount allowed in prompt settlement of Bates Accts Rec during June 1903 as recorded in Cash Book 6 folios 8 to 14 both inclusive		
46	Bates Accts Rec	56.65	
	To General Expense	3.0	
170	To General Expense	125.00	
156	To Individuals & Cos	125.00	
	Transferring amount of Bates Extra Expense for month of June 1903 from Bates Accts Rec Ledger into General Ledger		
46	Bates Accts Rec	125.00	
170	Bates Extra Expense	125.00	
	To Individuals & Cos	3.0	
156	To Sundries	78,896.71	
	Amount of Sales for month of June 1903 as Vouched in Abstract of Sales folios 354 to 357 both inclusive to be credited as follows		
170	General Expense		
151	Sales		
170	Manufacturing		

29,922.  
78,896.71  
828



Orange N.J. June 1903

✓ Sundries	30	
186 To Individuals & Cos		922.59 24
Amount of Disbursements vouchers during month of June 1903 as recorded in Register of Disbursements folios 122 to 128 both inclusive chargeable to		
170 General Expenses	20918.61	
189 Machinery & Tools	252.50	
27 Real Estate & Buildings	3645.67	
31 Furniture & Fixtures	108.12	
175 Manufacturing	667.57 8	
186 Individuals & Cos	112.56	
✓ Sundries	30	
175 To Manufacturing		20301.64
Amount of Material Transfer for month of June 1903 as recorded in Register of Disbursements folio 128 chargeable to		
170 General Expenses	3250.42	
27 Real Estate & Buildings	115.28	
31 Furniture & Fixtures	41.82	
175 Manufacturing	16900.91	

Orange N.J. July 1903

186 Individuals & Cos	31	
186 To Individuals & Cos		57.5
Transferring the following amounts from Dr. Cash Disbursements to Bates Accts Rec Ledger		
206 Jas S. Bayle & Co	2.00	
104 Power Mfg & Novelty Co	3.15	
176 Bates Accts Rec	5.15	
20 Jas S. Bayle & Co	2.00	
2 Power Mfg & Novelty Co	3.15	
186 Individuals & Cos	31	
170 To General Expenses		19
To debit account of Geo H. Hewitt & Co with amount of Cash Disbursements allowed on receipt of check, which was subsequently returned - no sale being effected.		19
46 Bates Accts Rec	.19	
3 Geo H. Hewitt & Co	.19	
186 Individuals & Cos	31	
186 To Individuals & Cos		117
To correct error in posting Bill dated June 24 1903.		
46 Bates Accts Rec	117	
101 Thorp Mfg Co	117	
46 Bates Accts Rec	117	
5 Thorp & Marten	117	
186 Individuals & Cos	31	
186 To Individuals & Cos		10
Transferring Bill # 44122 June 5 1903 from N.Y. to Phila. 10		
46 Bates Accts Rec	10	
5 Hon Mann Co Phila	10	
46 Bates Accts Rec	10	
1 Hon Mann Co N.Y.	10	

Orange N.J. July 1903.

170	General Expense	31	100.00	
186	To Individuals & Co		100.00	
	Transferring amount of Bates Extra Expense for month of July 1903 from Bates Acct Billed Ledger into General Expense			
46	Bates Acct Rec	100.00		
73	Bates Extra Expense	100.00		
186	Individuals & Co	31	242.35	
170	To General Expense		242.35	
	Amount of Cash Discount deducted in prompt settlement of Accounts Payable during month of July 1903 as recorded in Cash Book & folios 15 to 20 both inclusive			
170	General Expense	31	44.52	
186	To Individuals & Co		44.52	
	Amount of Cash Discount allowed in prompt settlement of Bates Acct Receivable for month of July 1903 as recorded in Cash Book & folios 15 to 20 both inclusive			
46	Bates Acct Rec	44.52		
186	Individuals & Co	31	8020.81	
	Amount of Disbursements disbursed during month of July 1903 as recorded in Register of Disbursements folios 128 to 136 and to the charge & no. journals			
170	General Expense		17661.46	
189	Machinery & Tools		3277.47	
37	Real Estate & Building		2884.41	
31	Furniture & Fixtures		63.04	
178	Manufacturing		56179.89	
186	Individuals & Co		6920	

Orange N.J. July 1903

1	Scrap	31		
178	Manufacturing		20083.37	
	Amount of Material Scrap for month of July 1903 as recorded in Register of Disbursements folios 128 to 136 chargeable to			
170	General Expense		1311.18	
189	Machinery & Tools		7.97	
37	Real Estate & Building		112.00	
31	Furniture & Fixtures		512.78	
178	Manufacturing		17096.10	
186	Individuals & Co	31	70410.69	
1	Scrap			
	For amount of Sales recorded in Abstract of Sales during month of July 1903 and to be credited as follows			
170	General Expense		2720.08	
184	Sales		70246.67	
178	Manufacturing		6920	

Orange 28 August 1903

131	General Expense	100.00	
132	Individuals & Co		100.00
	Transferring amount of Bates Estate Expense for month of Aug 1903 from Bates Estate Co. to this		
46	General Expense	100.00	
46	Bates Estate Expense	100.00	
31	General Expense	100.00	
32	Individuals & Co		100.00
	Amount of Cash Disbursements allowed in prompt settlement of Bates Estate Claim for month of Aug 1903 as recorded in Cash Book 11.		
46	Bates Estate Co.	100.00	
31	Individuals & Co	99.99	
32	General Expense		99.99
	Amount of Cash Disbursements allowed in settlement of Bates Estate Claim for month of Aug 1903 as recorded in Cash Book 11.		
31	Individuals & Co		99.99
32	General Expense		99.99
33	Individuals & Co		99.99
34	General Expense		99.99
35	Individuals & Co		99.99
36	General Expense		99.99
37	Individuals & Co		99.99
38	General Expense		99.99
39	Individuals & Co		99.99
40	General Expense		99.99
41	Individuals & Co		99.99
42	General Expense		99.99
43	Individuals & Co		99.99
44	General Expense		99.99
45	Individuals & Co		99.99
46	General Expense		99.99
47	Individuals & Co		99.99
48	General Expense		99.99
49	Individuals & Co		99.99
50	General Expense		99.99
51	Individuals & Co		99.99
52	General Expense		99.99
53	Individuals & Co		99.99
54	General Expense		99.99
55	Individuals & Co		99.99
56	General Expense		99.99
57	Individuals & Co		99.99
58	General Expense		99.99
59	Individuals & Co		99.99
60	General Expense		99.99
61	Individuals & Co		99.99
62	General Expense		99.99
63	Individuals & Co		99.99
64	General Expense		99.99
65	Individuals & Co		99.99
66	General Expense		99.99
67	Individuals & Co		99.99
68	General Expense		99.99
69	Individuals & Co		99.99
70	General Expense		99.99
71	Individuals & Co		99.99
72	General Expense		99.99
73	Individuals & Co		99.99
74	General Expense		99.99
75	Individuals & Co		99.99
76	General Expense		99.99
77	Individuals & Co		99.99
78	General Expense		99.99
79	Individuals & Co		99.99
80	General Expense		99.99
81	Individuals & Co		99.99
82	General Expense		99.99
83	Individuals & Co		99.99
84	General Expense		99.99
85	Individuals & Co		99.99
86	General Expense		99.99
87	Individuals & Co		99.99
88	General Expense		99.99
89	Individuals & Co		99.99
90	General Expense		99.99
91	Individuals & Co		99.99
92	General Expense		99.99
93	Individuals & Co		99.99
94	General Expense		99.99
95	Individuals & Co		99.99
96	General Expense		99.99
97	Individuals & Co		99.99
98	General Expense		99.99
99	Individuals & Co		99.99
100	General Expense		99.99

Orange 28 August 1903

131	Individuals & Co		89.69
132	General Expense		89.69
133	Individuals & Co		89.69
134	General Expense		89.69
135	Individuals & Co		89.69
136	General Expense		89.69
137	Individuals & Co		89.69
138	General Expense		89.69
139	Individuals & Co		89.69
140	General Expense		89.69
141	Individuals & Co		89.69
142	General Expense		89.69
143	Individuals & Co		89.69
144	General Expense		89.69
145	Individuals & Co		89.69
146	General Expense		89.69
147	Individuals & Co		89.69
148	General Expense		89.69
149	Individuals & Co		89.69
150	General Expense		89.69
151	Individuals & Co		89.69
152	General Expense		89.69
153	Individuals & Co		89.69
154	General Expense		89.69
155	Individuals & Co		89.69
156	General Expense		89.69
157	Individuals & Co		89.69
158	General Expense		89.69
159	Individuals & Co		89.69
160	General Expense		89.69
161	Individuals & Co		89.69
162	General Expense		89.69
163	Individuals & Co		89.69
164	General Expense		89.69
165	Individuals & Co		89.69
166	General Expense		89.69
167	Individuals & Co		89.69
168	General Expense		89.69
169	Individuals & Co		89.69
170	General Expense		89.69
171	Individuals & Co		89.69
172	General Expense		89.69
173	Individuals & Co		89.69
174	General Expense		89.69
175	Individuals & Co		89.69
176	General Expense		89.69
177	Individuals & Co		89.69
178	General Expense		89.69
179	Individuals & Co		89.69
180	General Expense		89.69
181	Individuals & Co		89.69
182	General Expense		89.69
183	Individuals & Co		89.69
184	General Expense		89.69
185	Individuals & Co		89.69
186	General Expense		89.69
187	Individuals & Co		89.69
188	General Expense		89.69
189	Individuals & Co		89.69
190	General Expense		89.69
191	Individuals & Co		89.69
192	General Expense		89.69
193	Individuals & Co		89.69
194	General Expense		89.69
195	Individuals & Co		89.69
196	General Expense		89.69
197	Individuals & Co		89.69
198	General Expense		89.69
199	Individuals & Co		89.69
200	General Expense		89.69

Orange Aug 9 1903

154	Deviden	Individuals & Co	600.00	600.00
	To a dividend of 10% per share on all stock of the company credited thereto payable Aug 24/03			
155	Thos. Patchelor	2885	290.55	
156	Michael Edison	50	37.50	
157	J. A. McKinchaw	50	37.50	
158	Samuel Dwyer	5	6.25	
159	William A. Edison	1500	175.50	
160	Thomas A. Edison	2072	259.25	
161	John T. Randolph	10	12.50	
162	J. E. Cleary	5	6.25	
163	John E. Kearney	5	6.25	
164	O. E. M. Kearney	5	6.25	
165	Walter C. Kelley	517	262.50	
166	Wm. D. Cutler	1317	164.62	

Orange September 1903

185	Individuals & Co	600	600
186	Individuals & Co	600	600
	To transfer claim of deposit paid to the Edison Company Co. in 1903		
187	Bates Accts Rec	600	
200	Ed. Dominion Paper Co	600	
188	Bates Accts Rec	600	
100	Ed. Dominion Paper Co	600	
189	Inds & Co	175	175
190	Inds & Co	175	175
	To transfer the following accounts		
191	Bates Accts Rec	175	
192	The State of Texas	175	
193	Bates Accts Rec	175	
194	Ed. Dominion Paper Co	175	
195	Inds & Co	770	770
196	Inds & Co	770	770
	To suspense the following items		
197	Suspenses	770	
198	Individuals & Co	600	600
199	Individuals & Co	600	600
	To transfer from Inds & Co. to Bates Accts Rec the following items		
200	Bookkeeper C. C. Kelley	600	
1	Bates Accts Rec	600	
2	Bookkeeper C. C. Kelley	600	
201	Individuals & Co	100	100
202	Individuals & Co	100	100
	To transfer August balance of 107 from Natl. Home Co. Orange to Natl. Home Co. Chicago		
203	Natl. Home Co. Orange	107	
204	Natl. Home Co. Chicago	107	

Orange N.J. September 1900

16	Individuals & Co.		7.11	
18	Individuals & Co.			4.24
To transfer balance of Hall Phone Co. amount \$19.45 from Bates Co. Bu. Bldg. to Individuals & Co. Bldg.				
4	Bates Co. Bu. Bldg.	2.11		
10	Hall Phone Co.	7.11		
2	Hall Phone Co.	7.11		
16	Individuals & Co.		17.25	
18	Individuals & Co.			17.25
To transfer amount credited to Thompson & Martin in 1900				
4	Bates Co. Bu. Bldg.	19.00		
5	Thompson & Martin	19.00		
4	Bates Co. Bu. Bldg.	19.25		
3	Library Removal	19.25		
16	Individuals & Co.		46.29	
18	Individuals & Co.			46.29
To transfer bill 2100 1221 21019 & 2100 2101 2101 2101 same were charged in Abstract of sales to Hall Phone Co. instead of 2101 2101 2101				
1	2. Silver Mfg. Co.	46.29	Hall Phone Co.	12.6
18	Individuals & Co.		1.00	
18	Sales			1.00
To correct error in Abstracting bill 2101 2101 same were charged to Bates Co. instead of 2101 2101 2101				
1	2. Hall Phone Co.	1.00	Phone	3
18	Manufacturing		62.38	
19	General Expense			62.38
To correct error in distribution on Voucher # 116 August				
15	Rare Material	62.38		

Orange N.J. September 1900

75	Manufacturing			1.080
19	Manufacturing			1.080
To transfer 10% from Manufacturing & Tools to Miscellaneous due to wrong distribution of shop order 916 Aug. Aug. Bill				
141	Miscellaneous	10.5		
71	General Expense		100.00	
186	General Expense			100.00
Transferring amount of Bates Co. Bu. Bldg. for month of September 1900 from Bates Co. Bu. Bldg. into General Expense				
4	Bates Co. Bu. Bldg.	100.00		
2	Bates Co. Bu. Bldg.	100.00		
18	Individuals & Co.		127.70	
71	General Expense			127.70
Amount of Cash Disbursements deducted in settlement of Cash Disbursements during month of Sept 1900 as recorded in Cash Book 11 Jan. 20 to 24 inclusive				
71	General Expense		14.08	
186	General Expense			14.08
Amount of Cash Disbursements allowed in prompt settlement of Bates Co. Bu. Bldg. for month of Sept 1900 recorded in Cash Book 11 Jan. 20 to 24 inclusive				
4	Bates Co. Bu. Bldg.	14.08		
186	Individuals & Co.		112.21	15.51
The amount of sales recorded in Abstract of sales during month of September 1900 and to the credit, as follows				
71	General Expense			172.51
154	Sales			112.21
18	Manufacturing			15.51



Orange 27<sup>th</sup> October 1902

117	Individuals & Co	104.97	
171	General Expense		104.97
Amount of Cash Disbursements deducted in settlement of Accounts Payable during month of October 1902 as recorded in Cash Book 26 folio 56 & 57. m.c.			
171	General Expense	63.72	
117	Individuals & Co		63.72
Amount of Cash Disbursements allowed in payment of settlement of Bates Costs Rec for month of October 1902 as recorded in Cash Book 24 folio 25 & 26. m.c.			
4	Bates Costs Rec	63.72	
117	Individuals & Co	160.266.01	
1	Amudris		
For amount of Sales recorded in Abstract of Sales during month of Oct 1902 to be credited.			
171	General Expense		20.093
191	Machinery & Tools		17.660
178	Manufacturing		142.886.12
1	Amudris		3.36
117	Individuals & Co		111.963.67
For amount of Disbursements entered in Register of Disbursements during month of October 1902 folio 106 & 107 and charges on folio 108.			
171	General Expense		19.023.82
191	Machinery & Tools		3.814.29
178	Manufacturing		121.033
117	Individuals & Co		87.209.87
1	Amudris		55.30

Orange 27<sup>th</sup> October 1903

117	Individuals & Co		54.80
171	General Expense		14.80
To correct distribution on January 12 October 1903			
118	C. Brauman	34.00	
119	D. Brauman	21.00	
171	General Expense		
178	Manufacturing		32.168.87
Amount of Material Transfers for month of October 1902 as recorded in Register of Disbursements folio 106 & 107 and charges on folio 108.			
171	General Expense		75.16.70
171	Real Estate & Buildings		94.01
171	Furniture & Fixtures		17.77
178	Manufacturing		22.53.49
171	General Expense		12.500
171	Individuals & Co		12.500
Transferring amount of Bates Extra Expense for month of Oct 1903 from Bates Costs Rec Ledger to General Ledger			
4	Bates Costs Rec	125.00	
1	Bates Extra Expense	125.00	





Orange Nj November 1903

187	Individuals & Co	14.55	
187	Individuals & Co	14.55	
	To transfer above amount from National Phone Co. to Edison Phone Works Ledger		
187	Edison Phone Co.	14.55	
2	National Phone Co.	14.55	
187	Individuals & Co	700.00	
	Sundries		
	Two except Drafts this day payable @ 50% be paid respectively payable at Union National Bank Newark N.J. with interest @ 6% in settlement of account to Oct 1st 1903		
187	Notes Payable	250.00	
187	Bridgeport Bank Co.	250.00	
	" " "	250.00	
187	General Expense	7014	
187	Individuals & Co	7014	
	Amount of Cash Discount allowed in payment settlement of Bates Accts Rec for month of Nov 1903 as recorded in Cash Book folio 52 to 54		
187	Bates Accts Rec	7014	
187	Individuals & Co	1246.891	
	Sundries		
	The amount of Cash recorded in Abstract Sales during month of November 1903 to be credited as follows		
187	Machinery & Tools	11.97	
187	General Expense	17.54	
187	Sales	1246.693	
187	Manufacturing	24.28	

Orange Nj November 1903

187	Individuals & Co	66.66	
187	General Expense	66.66	
	Amount of Cash Discount allowed in settlement of Accounts Payable during month of November 1903 as recorded in Cash Book folio 52 to 54		
187	Individuals & Co	26.25	
187	Individuals & Co	26.25	
	To transfer the following accounts		
4	Bates Accts Rec	26.25	
4	Tampa Photo Supply Co.	26.25	
4	Tampa Photo Supply Co.	26.25	
187	General Expense	100.00	
187	Individuals & Co	100.00	
	Transferring amount of Bates Extra Expense for month of November 1903 from Bates Accts Rec Ledger to General Ledger		
4	Bates Accts Rec	100.00	
4	Bates Extra Expense	100.00	
187	Sundries		
187	Individuals & Co	97618.51	
	The amount of monies entered in register of Disbursements during month of November 1903 folio 161 to 166 inclusive and charges as follows		
187	General Expense	16744.20	
187	Machinery & Tools	566.91	
27	Real Estate & Building	441.74	
187	Automobile Account	1363.60	
187	Manufacturing	71463.61	
187	Individuals & Co	49.55	

Orange 21/9 November 1900

1	Securities		
171	Manufacturing	2627.01	
	Amount of Material Transferred for month of November 1900 as recorded in Register of Disbursement folio 11 to 111 incl. Chicago 11 to 111		
171	General Expense	5817.05	
172	Machinery & Tools	37	
173	Real Estate & Building	711.65	
174	Machinery & Tools	20137.07	
175	General Expense	687.85	
176	Real Estate & Building	287.85	
	To correct error in Real Material Transferred 222. amount of this transfer should be \$18.36. \$61.00 was charged to Real Estate & Building instead of General Expense		
	Cash 25.91		
	Miss 109.80		
	Mach 26.67		
	Tool 183.05		
	Material 74.06		
	Light 25.22		
171	General Expense	3834.76	
178	Manufacturing	2434.76	
	To correct error in Real Estate & Building B.P. 200 Bills 277.00 + 277.00 = 554.00 was having been credited to General Expense (Building & Machinery account) instead of Real Estate		
161	Real Estate & Building	2434.76	

Orange 21/9 December 1900

187	Individuals & Co.	101	
187	Individuals & Co.	70	
	To transfer the following accounts		
1	Bates Accts. Rec. 70		
1	National Phone Co. F.D. 07		
207	Woolly Advertising Co. 36		
1	101 H. Chapman & Co. 30		
1	301 Nashville Nat. Bk. Co. 12		
1	Bates Accts. Rec. 70		
1	Bates Accts. Rec. 70		
187	Individuals & Co.	52.74	
187	Individuals & Co.	32.74	
	Note from National Bk. Co. dated Dec 20/00 as one month payable to Merchants National Bank New York Co. 32.74		
1	Bates Accts. Rec. 32.74		
1	National Bk. Co. 32.74		
1	101 H. Chapman & Co. 32.74		
1	Bates Accts. Rec. 32.74		
187	Individuals & Co.	111.65	
187	Individuals & Co.	24.63	
	To transfer the following items bill 18000 Bills 18000 + 18000 = 36000 from National Phone Co. Transfer Sept. actual disbursement to National Phone Co. 18000 + 18000 = 36000		
1	Bates Accts. Rec. 111.65		
1	National Phone Co. 18000 + 18000 = 36000		
1	Bates Accts. Rec. 111.65		
1	National Phone Co. 18000 + 18000 = 36000		
187	Individuals & Co.	5.91	
187	Individuals & Co.	1.91	
	To transfer the following		
1	Bates Accts. Rec. 5.91		
1	United States Pension Agent 5.91		
1	Bates Accts. Rec. 5.91		
1	E. H. Collins 1.91		

Orange N.J. December 1908

[illegible]

Orange 9 December 1903

189	Individuals &c	General Expenses	30.31
191	Amount of Cash Disbursements deducted in prospect settlement of Cash Payments during December 1900 as recorded in Cash Book & paid to last inclusive		30.31
189	Individuals &c	Summaries	126.229.10
✓	For amount of sales recorded in abstract of sales during month of December 1900 to be credited as follows		
191	General Expenses		179.27
194	Notes		126.02.81
195	Manufacturing		128.02
✓	Summaries		
190	Individuals &c		1.04.168.71
Amount of Disbursements made during month of December 1900 as recorded in Register of Disbursements paid to last inclusive & charged as follows			
191	General Expenses	28,589.07	
190	Machinery & Tools	600.06	
27	Cash Sales & Receipts	26,957	
195	Manufacturing	75,645.60	
189	Goodwill Insurance	56.6	
✓	Summaries		
199	Manufacturing		25,912.93
Amount of Material Disbursements for month of December 1900 as recorded in Register of Disbursements paid to last inclusive & charged as follows			
91	General Expenses	6,255.81	
190	Machinery & Tools	11.00	
27	Cash Sales & Receipts	12,888	
195	Manufacturing	18,621.24	

January 31<sup>st</sup> 1904

191	General Expense		100.00	
192	Index & Co			100.00
	Transferring amount of Bates extra expenses for month of January 1904 from Bates Accts Rec. to General Expense			
1	Bates Accts Rec. \$100.00			
2	Bates extra expenses \$100.00			
191	General Expense		57.95	
192	Index & Co			57.95
	Amount of Cash Disbursements allowed in prompt settlement of Bates Accts Rec. during January 1904 as recorded in Cash Book \$1. balance to 18 advance			
4	Bates Accts Rec. \$57.95			
191	Index & Co		25	
192	Index & Co			25
	In suspense the following accounts			
11	Bates Accts Rec. \$1	4		
3	Bates Expense \$1			
214	Franklin Press Co	1		
10	Marucci & Co	10		
207	H. Thompson	1		
208	Thompson & Co	1		
209	W. E. Green	1		
210	Campbell Printing Co.	1		
191	Individuals & Co		122.9	
192	Individuals & Co			122.9
	In suspense the following accounts			
3	Bates Expense \$22.9			
11	Bates Accts Rec. 122.9	4		
200	See M. Wright	5.00		
201	E. P. Salter	1.00		
110	Brown & Co	1		
107	Henry & Co	2.00		
102	H. C. Haggens	2.00		

Orange N. J. January 1904

191	Individuals & Co		26.85	
192	Individuals & Co			26.85
	In transfer the following accounts			
200	Comm of Patents	229		
2	Natl Phone Co	100		
201	J. C. Davidson	15		
11	Bates Accts Rec. \$26.85			
191	Machinery & Tools		105.00	
27	Machinery & Tools			105.00
	To correct error in distributing invoices \$264 Aug. 1903 entered in ledger of disbursements in that balance building columns instead Machinery & Tools			
191	General Expense		4.00	
192	Individuals & Co			4.00
	To correct error in distributing invoices \$12.00 Sept. 1903 F. A. Brown & Co. It was charged under General Expense (log) P. C. Cash book Sept. 1903 F. A. Brown & Co. \$12.00			
191	Individuals & Co		93.26 19	
192	Individuals & Co			93.26 19
	For amount of sales recorded in Abstract of sales during month of January 1904 to be credited on general ledger			
191	General Expense		27.15	
192	Sales			27.15
193	Machinery & Tools		18.5	
191	Individuals & Co		26.71	
192	Individuals & Co			26.71
	Amount of Cash Disbursements deducted in prompt settlement of Bates Expense during January 1904 as recorded in Cash Book \$26.71			

Orange 24 January 1924

150	Dividend	Individuals & Co	7508.68
	Amount of Dividend cashed during month of January 1924 as recorded in Register of Disbursements folios 176 to 181.		
171	General Exp. & Losses		19,172.89
172	Machinery & Tools		600.77
173	Real Estate & Building		1,076.96
174	Furniture & Fixtures		31.75
175	Manufacturing		13,042.29
176	Unpaid interest		56.54
177	Dividend	Manufacturing	182,71.02
	Amount of Material Transfer for month of January 1924 as recorded in Register of Disbursements folios 176 to 181 inclusive charged to		
171	General Exp. & Losses		16.10.05
172	Machinery & Tools		17.62
173	Real Estate & Building		29.89
174	Furniture & Fixtures		14.34
175	Manufacturing		13,546.06

Orange 24 February 1924

160	Dividend	20	
177	Individuals & Co	6018.00	6018.00
	For a dividend of 125 per share on all stock of the company entitled thereto payable February 20th 1924		
107	Charles Bolander	248.440.00	310.50
108	Mr. J. A. Edison	20	25.00
109	Henry B. Goodrich	20	25.00
100	International Telephone	14.20	17.75
1	Thomas A. Edison	247.200	212.90
100	John J. Randolph	10	12.50
8	Mr. C. E. Kilmore	5	6.25
107	David W. Cutting	113.250	24.90
108	Albert Cutting	217	276.25
109	Stephen F. Murphy	5	6.25
100	Oliver J. Tello	5	6.25
110	Bond Interest	19	
136	Unpaid Bond Interest	100.00	100.00
	Amount of Bond Interest due on Corporation Bonds 200, 250, 250 & 200 remaining unclaimed and unpaid February 20th and subject to claim and amount of same \$72.00		
		Paid	7.00.00
177	Individuals & Co	107.04	
171	General Expense		107.04
	Amount of Cash Dividend deducted in prompt settlement of Aceto Payable during February 20th as recorded in Cash Book & plant & person		
177	Individuals & Co	58.19	
187	Individuals & Co		58.19
	To transfer the following amounts		
	To Universal Electric & Battery Co. \$5.7		
	To John T. Linn Co. \$5.7		

Orange N.Y. February 1904

130	Notes Receivable	29	1120.06		
131	Individuals & Co.		1120.06		
	Received this day note payable on the 20th of August 1904 at Standard National Bank Chicago Ill for \$1890.00				
	paying note falling due July 29th for \$1890.00				
	Edwin Pollard Asset Co. 1890.00				
132	Individuals & Co.	15			
133	Individuals & Co.		15		
	To transfer the following accounts				
134	Bates Accts Rec	10			
135	Edwin Iron Works	5			
136	Edwin Iron Works	5			
137	General Expense		12130		
138	Individuals & Co.		12130		
	Transferring amount of Bates Accts Rec for month of Feb 1904 from Bates Accts Rec ledger to General ledger				
139	Bates Accts Rec	10			
140	Bates Accts Rec	10			
141	General Expense		87.79		
142	Individuals & Co.		87.79		
	Amount of Cash Disbursements allowed on prompt settlement of Bates Accts Rec during February 1904 as recorded in Cash Rec'd for Feb 1904				
143	Bates Accts Rec	2.07			
144	Individuals & Co.		1.49		
145	Individuals & Co.		1.49		
	To transfer the following accounts				
146	Bates Accts Rec	1.49			
147	Edwin Iron Works	1.00			
148	Edwin Iron Works	1.00			
149	General Expense		12.21		

Orange N.Y. February 1904

150	General Expense	29			
151	Individuals & Co.		28.00		
	29 allowance on net purchase for month ending February 29th 1904				
	Cash purchase \$12.21 29 \$28.00				
152	Bates Accts Receivable		2.80		
153	National Chrome Co. Supply Dept		2.80		
154	Individuals & Co.		18.80		
155	Individuals & Co.		18.80		
	To transfer the following accounts				
156	Bates Accts Rec	18.80			
157	H. C. Shaver	9.50			
158	Edwin Iron Works	9.50			
159	Individuals & Co.		2.60		
160	Individuals & Co.		2.60		
	To transfer the following accounts				
161	Bates Accts Rec	2.60			
162	Edwin Iron Works	2.60			
163	General Expense		1.10		
164	Individuals & Co.		1.10		
	To charge National Chrome Co. with amount of check received by them from H. C. Shaver Feb 1st 1904. Check should have been made payable to Edwin Iron Works on settlement of R. W. Cole's bill				
165	National Chrome Co.	1.10			
166	Profit & Loss		50.69		
167	Individuals & Co.		50.69		
	To write off amount of Bates expenses for fiscal year ending Feb 29th 1904				
168	Bates Accts Rec	50.69			
169	Bates Expense	50.69			



Orange N.J. February 1904

185	Individuals & Co	115705.56	
	Amount of Sales recorded in Abstract of Sales during month of Feb'y 1904 and to be credited on following		
186	General Expense	606.29	
187	St. L.	11107.18	
188	Manufacturing	27.29	
	<u>Summaries</u>		
189	Individuals & Co	86757.38	
	Amount of Disbursements recorded during month of February 1904 in Register of Disbursements folios 118 to 119		
	Materials & Charges on		
190	General Expense	12201.07	
191	Machinery & Tools	882.67	
192	Rail Road & Building	4089.86	
193	Manufacturing	567.0	
194	Machinery & Tools	64830.79	
195	Rail Road & Building	274.5	
	<u>Summaries</u>		
196	Manufacturing	20475.92	
	Amount of Material Transferred for month of February 1904 as recorded in Register of Disbursements folios 118 to 119 and balance chargeable to		
197	General Expense	16918.27	
198	Machinery & Tools	611.6	
199	Rail Road & Building	341	
200	Manufacturing	635	
201	Manufacturing	15051.69	

Orange N.J. February 1904

181	Individuals & Co		64.56
182	Individuals & Co		64.56
	To transfer the following accounts		
8	Machinery & Tools	01	Scrap
106	Scrap	04	Charging to
100	Machinery & Tools	30	Scrap
106	Scrap	05	Machinery & Tools
106		06	Scrap
9	Profit & Loss		72.57
188	Individuals & Co		72.57
	To write off scrap account		
	for fiscal year ending July 25, 1904		
200	Scrap		72.57
198	Manufacturing		10524.98
199	Manufacturing		10524.98
	To transfer amount standing to the credit of Manufacturing to the credit of Photograph		
203	Photograph		1828.55
17	Photograph		1828.55
175	Manufacturing		7112.66
171	General Expense		7112.66
	To transfer amount standing to the credit of Box Factory to the credit of General Expense		
161	Box Factory		7112.66
8	Profit & Loss		20702.00
	Summaries		
	To write off the following accounts		
146	Box Factory		14700.00
161	Box Factory		20672.00

Orange N.J. February 1904

175	Manufacturing	Manufacturing	15278.04	
176	Transfer to consolidated Spring Water Account with Photogr. Account		16572.04	
177	Photograph 15373.75			
178	Spring Water 15273.04			
179	Sales		25919.88	
180	Transfer to consolidated items		25919.88	
181	Spring Water 15273.04			
182	Electric Water 170.53			
183	Losses 1012.52			
184	Phone 21976.70			
185	Miscellaneous 170.53			
186	General Expense		478.63	
187	Transfer to consolidated items		478.63	
188	Raw Material Sales 976.53			
189	Distribution			
190	Oil 779.75			
191	Gas 53.29			
192	Light 75.75			
193	Heat 8.69			
194	Misc 26.15			
195	Secondary			
196	Manufacturing		7159.77	
197	Additional amount of material transfer for month Feb. 1904 recorded in Department of Performance for 1904 charged to			
198	General Expense		17062.6	
199	Raw Estate & Building		78.00	
200	Furniture & Fixtures		20.00	
201	Manufacturing		1870.32	

Orange N.J. February 1904

177	General Expense		1846.10	
178	Manufacturing		1846.10	
179	Transfer to make Box Factory account agree with inventory			
180	Box Factory 1846.10			
181	Manufacturing		1846.76	
182	Transfer to make Japaning account and Raw Material account equal inventory		1846.76	
183	Phone 1846.76			
184	Japaning 121.80			
185	Raw Material 4965.36			
186	Machinery & Tools		17.82	
187	Ball Estate & Building		17.82	
188	To correct errors in distribution of the following March 1904 Feb. 1904 charged to Ball Estate & Building should be Machinery & Tools			
189	General Expense		22.85	
190	Ball Estate & Building		22.85	
191	To correct errors in distribution of the following March 1904 Feb. 1904 charged to Ball Estate & Building should be			
192	Oil 779.75			
193	Gas 53.29			
194	Light 75.75			
195	Heat 8.69			
196	Misc 26.15			
197	Furniture & Fixtures		182.77	
198	Ball Estate & Building		182.77	
199	To correct errors in distribution of the following March 1904 Feb. 1904 charged to Ball Estate & Building should be			
200	Oil 779.75			
201	Gas 53.29			
202	Light 75.75			
203	Heat 8.69			
204	Misc 26.15			



Orange N.Y. February 1904

8	Profit & Loss	6473.92	
14	Manufacturing		6473.92
	To write off our old item of Depreciation		
178	Manufacturing	2692.88.01	
21	General Expenses		2692.88.01
	To distribute pro rata General Expenses over the following accounts		
17	Photographs	162.269.50	
31	Auto Numbering Machine	11.256.79	
163	Wax	56.441.24	
142	Miscellaneous	8.014.80	
137	Fans Motor	47.9.05	
139	Cray Kinetoscope	3.024.71	
157	Cabinets	29.807.45	
175	Manufacturing	11627.50	
21	General Expenses		11627.50
	To transfer to 1 account directed by checkable		
	to Auto Numbering Machine		
21	Auto Numbering Machine	11627.50	
175	Manufacturing		710.72
78	Individuals & Co		710.72
	Amount charged by Edison Portland Cement Co. for repairs to duplicate meters		
	United City		
152	Miscellaneous	710.72	
	Edison ref. p. c.		
154	Sales	132536.18	
8	Profit & Loss		132536.18
	To Profit realized on the following accounts during fiscal year ending Feb. 29, 1904		
3	Photographs	87.173.00	
14	Auto Numbering Machine	15.079.41	
66	Auto Numbering Machine	1.337.48	
8	Wax	32.972.99	
27	Miscellaneous	445.14	
106	Fans Motor	127.06	
39	Cray Kinetoscope	2218.87	
56	New Material Sales	631.08	
70	Cabinets	2100.25	

Orange N.Y. Feb. 1904

154	Sales		
168	Individuals & Co		4109.17
	To Credit National Phon Co with amount		4109.17
	to make Capital Photograph & Wax accounts equal w/ of Labor & material plus General Expenses and depreciation as per memorandum		
	General Inventory Feb. 15th		
Phono	675.69.27	774.16.72	CR 10007 87.173.00
Wax	248.218.84	2.515.65	CR 49127 32.972.99
	22188.21	119.239.27	87.645.04 121147.29
	Compensation by Cr. Club Phon. 12525.65		
	Mar. 12228.39	142.00.46	
4	National Phon Co		4109.17
8	Phono	16274.97	
8	Wax	24824.80	
154	Sales		1057212.99
178	Manufacturing		1057212.99
	To transfer cost of sales of the following accounts for fiscal year ending Feb. 29, 1904		
17	Photographs	CR 10007	3
31	Auto Numbering Machine	CR 49127	14
117	Auto Numbering Machine	1.337.48	66
163	Wax	32.972.99	8
142	Miscellaneous	34.919.06	27
132	Fans Motor	2.022.01	106
139	Cray Kinetoscope	127.99.41	39
104	New Material Sales	2.022.01	56
137	Cabinets	142.00.46	70

Orange 22<sup>nd</sup> March 1904

188	Individuals & Co	4455	
188	Individuals & Co	4455	
	Dr. Groups the following accounts		
✓ 11	Rates Accts Recd - 1145	Rates Accts Recd - 1145	
101	International Steamships - 90	At & Washington 102	
102	London & North Western Ry Co - 107	107	
103	London & North Western Ry Co - 201	201	
104	London & North Western Ry Co - 1400	London & North Western Ry Co - 1400	
105	General Expenses	80 12	
188	Individuals & Co	80 12	
	Amount of cash disbursements allowed in group the following month of March 1904 as recorded in Cash Book to folio 116 77		
11	Rates Accts Recd - 500 31		
188	Individuals & Co	2477	
188	Individuals & Co	2477	
	Amount of Cash Disbursements deducted in group the following month of March 1904 as recorded in Cash Book to folio 116 77		
107	General Expenses	100 00	
188	Individuals & Co	100 00	
	Transferring amount of Rates extra expenses for month of March 1904 from Rates Accts Recd to General Expenses		
11	Rates Accts Recd - 100 00		
7	Rates Accts Recd - 100 00		

Orange 22<sup>nd</sup> March 1904

188	Individuals & Co	121477 98	
✓	Dr. Groups the following accounts		
	Amount of Sales for current month as recorded in abstract of Sales for a year to 1904 both inclusive it is included in present		
177	General Expenses	67 65	
178	Sales	121500 61	
179	Manufacturing	14 70	
1	Individuals & Co		
179	Manufacturing	20478 17	
	Amount of Material charges for month of March 1904 as recorded in Register of Disbursements folio 126 charges to		
177	General Expenses	6197 26	
178	Manufacturing & Tools	86 81	
179	Manufacturing	14 34 10	
1	Individuals & Co		
188	Individuals & Co	101211 99	
	Amount of Disbursements recorded during month of March 1904 as recorded in Register of Disbursements folio 126 to 1904 both inclusive charges to		
177	General Expenses	2284 29	
178	Manufacturing & Tools	60 24	
179	Manufacturing & Tools	68 24	
188	Individuals & Co	1157 19	
179	Manufacturing	8174 76	

Orange N.J. April 30 - 1904

177	General Expense		100.00	
178	Individuals & Co.			100.00
	Transferring amount of Bates & Bates Expense for month of April 1904 from Bates & Bates Co. ledger to General Expense			
179	Bates Accounts Receivable	100.00		
180	Bates & Bates Co. Expense	100.00		
181	Individuals & Co.		60.36	
182	General Expense			60.36
	Amount of Cash Payments deducted in prompt settlement of Accounts Payable during month of April 1904 as recorded in Cash Book "C" folios 28 to 31 inclusive			
183	General Expense		78.45	
184	Individuals & Co.			78.45
	Amount of cash amounts received in prompt settlement of Bates & Bates Co. during month of April 1904 as recorded in Cash Book "C" folios 32 to 35 inclusive			
185	Bates & Bates Co.	78.45		
186	Individuals & Co.		98	
187	Individuals & Co.			98
	To transfer the following accounts			
188	Bates & Bates Co.	98	Bates & Bates Co.	
189	M. C. Co.		98	
190	M. C. Co.		98	
191	M. C. Co.		98	
192	Individuals & Co.		200.00	
193	Individuals & Co.			200.00
	To transfer the following accounts			
194	Edw. P. Remington	20.00	Bates & Bates Co.	
195	Edw. P. Remington	20.00		

Orange N.J. April 1904

186	Individuals & Co.		108.90	
187	General Expense			108.90
	Amount of sales for current month as recorded in Abstract of Sales folios 108 to 111, both inclusive to be credited as follows			
188	General Expense			118.58
189	Sales			108.90
190	Manufacturing			166
191	Individuals & Co.		107.87	
192	Individuals & Co.			107.87
	Amount of Disbursements transferred during month of April 1904 as recorded in Register of Disbursements folios 192 to 203 both inclusive chargeable to			
193	General Expense		181.01	
194	Machinery & Tools		25.99	
195	Real Estate & Building		62.70	
196	Furniture & Fixtures		70.00	
197	Manufacturing		84.88	
198	Individuals & Co.		147.71	
199	Individuals & Co.			147.71
	Amount of Material Transfers for month of April 1904 as recorded in Register of Disbursements folios 192 to 203 and chargeable to			
200	General Expense		164.55	
201	Machinery & Tools		77.29	
202	Real Estate & Building		26.83	
203	Furniture & Fixtures		5.47	
204	Manufacturing		181.79	

Orange H. J. May 1904

165	Dividend	70	6015.00	6015.00
168	Individuals & Co			
	For a dividend of 1% per share on all the stock of the company entitled thereto payable May 1, 2004 1904			
169	Charles B. Baker	245.44	2.45	247.89
170	Wm. H. C. Baker	446.26	4.46	450.72
171	Henry B. Baker	250.00	2.50	252.50
172	John B. Baker	1800.00	18.00	1818.00
173	Thomas C. Baker	2221.20	22.21	2243.41
174	John T. Baker	10.00	0.10	10.10
175	W. E. Baker	163.00	1.63	164.63
176	Charles J. Baker	5.00	0.05	5.05
177	W. H. Baker	5.00	0.05	5.05
	Dividend # 19	4,814.80	6015.00	
178	Individuals & Co		125	125
179	Individuals & Co			
	Transfers the following accounts			
180	Baker & Co	125	Baker & Co	125
181	J. A. Baker	10	Adams Express Co	173
182	W. E. Baker	1.00	Baker & Co	1.00
183	Individuals & Co		450	450
184	Individuals & Co		463	463
	Accred National Phone Co. having paid with others amount they having been charged in error will bill # 463			
185	Baker & Co	450	Baker & Co	4
186	Baker & Co	450	National Phone Co	1
187	General Expense		100.00	100.00
188	Individuals & Co			
	Transferring amount of Baker & Co Expense for month of May 1904 from Baker & Co. per ledger to General Expense			
189	Baker & Co	100.00		
190	Baker & Co	100.00		

Orange H. J. May 1904

185	Individuals & Co		24.00	24.00
186	General Expense			
	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book # 6 folio 81 to 92 inclusive			
187	General Expense		74.00	74.00
188	Individuals & Co			
	Amount of Cash Disbursements deducted in prompt settlement of Baker & Co. during month of May 1904 as recorded in Cash Book # 6 folio 11 to 92 inclusive			
189	Baker & Co		74.00	74.00
190	Individuals & Co			
191	Individuals & Co		84.66	84.66
	Amount of Disbursements recorded during month of May 1904 as recorded in Register of Disbursements from 100 to 200 both inclusive charged to			
192	General Expense		187.77	187.77
193	Machinery & Tools		186.90	186.90
194	Real Estate & Buildings		192.15	192.15
195	Furniture & Fixtures		30.27	30.27
196	Manufacturing		63.31	63.31
197	Individuals & Co		10.95	10.95

Orange N.J. March 1906

✓	Summary		
179	Manufacturing	26.40.00	
	Amount of material transferred for month of May 1906 as recorded in report of disbursement Feb 20 1 to 20 February to		
177	General Expense	27.00.00	
178	Coal, Oil & Fuel	5.99	
179	Furniture & Fixtures	31.08	
179	Manufacturing	17.21.78	
183	Individuals & Co.	71.76.58	
✓	Summary		
	Amount of sales for current month as recorded in Abstract of Sales from 190 to 191 sold and amount to be credited on invoice		
179	General Expense	100.00	
179	Manufacturing & Sales	1.00.00	
179	Sales	71.40.66	
179	Manufacturing	6.00	

Orange N.J. June 1906

181	Individuals & Co.	8.40	
178	Individuals & Co.	8.40	
	To transfer the following accounts		
2	National Phone Co. 640 Bats Accts Rec	4.1	
	National Phone Co. 8.40	100.1	
182	Individuals & Co.	11.38	
181	Individuals & Co.	11.38	
	To transfer the following accounts		
104	Phone Mch of May 1134 Bats Accts Rec	4.1	
	Phone Mch of May 11.38	110.1	
188	Individuals & Co.	25.00	
182	Individuals & Co.	25.00	
	To transfer the following accounts		
1	National Phone Co. 25.00	20.1	
182	Individuals & Co.	20.32	
182	Individuals & Co.	20.32	
	To transfer the following accounts		
1	Bats Accts Rec 30.32	Bats Accts Rec 4.1	
✓	110	Phone Mch of May 2.28	110.1
✓	3	Expense 12.08	11.4
✓	188	Individuals & Co.	27.28
179	General Expense	27.28	
	Amount of Cash Disbursements entered in pamphlet settlement of Bats Accts Rec during month of June 1906 as recorded in Cash Book 6 Feb 92 to 95		
177	General Expense	76.69	
183	Individuals & Co.	76.69	
	Amount of Cash Disbursements entered in pamphlet settlement of Bats Accts Rec during month of June 1906 as recorded in Cash Book 6 Feb 92 to 95		
	Bats Accts Rec 76.69	✓	

Orange N.J. June 1904

177	General Expense	100.00	
178	Individuals & Co	100.00	
Transferring amount of Bates Accts. Expense from Bates Accts. Rec. Ledger to General Ledger			
	Bates Accts. Receivable 100.00	11	
	Bates Accts. Expense 100.00	9	1
1	Surplus		
185	Individuals & Co	87.63	50
Amount of Disbursements recorded during month of June 1904 as recorded in Register of Disbursements of fees			
187.00 both inclusive charges due to			
177	General Expense	18.79	64
180	Machinery & Tools	12.64	38
177	Real Estate Building	1.03	38
173	Manufacturing	54.11	18
193	Individuals & Co	1.01	50
1	Surplus		
176	Manufacturing	17.55	64
Amount of Material Transfers for month of June 1904 as recorded in Register of Disbursements of fees &c. to be charged to			
177	General Expense	3.32	15
190	Machinery & Tools	1.17	64
177	Real Estate Building	.78	67
173	Manufacturing	14.00	89
188	Individuals & Co	28.70	64
1	Surplus		
Amount of Sales for current month as recorded in abstract of Sales for 1904 to 1905 both inclusive to be credited as follows			
177	General Expense	6.16	50
180	Machinery & Tools	8.67	
177	Real Estate	87.98	61
176	Manufacturing	16.31	18

Orange N.J. July 1904

193	Individuals & Co	1.30	
193	Individuals & Co	1.30	
To transfer the following accounts			
4	Bates Accts. Rec.	12.58	Bates Accts. Rec. 11
111	F. Bogardus	3.00	Unpaid dated stamp 11/12
110	Accts. Merchants of NY	10.00	Bates Accts. Rec. 11
193	Individuals & Co	90.71	
193	Individuals & Co	90.71	
Received this day Note from B. B. Mader Printing Co dated July 6 <sup>th</sup> 1904 payable at Central Savings Bank Co. to the order of			
in settlement of their a/c. to July 1 <sup>st</sup> 1904			
4	Bates Accts. Rec.	90.71	
101	Bates Accts. Receivable	90.71	
	Bates Accts. Rec.	90.71	108
	The B. B. Mader Printing Co.	90.71	108
193	Individuals & Co	52.00	
193	Individuals & Co	52.00	
To transfer the following accounts			
108	Accounts Merchants of NY	110.00	Bates Accts. Rec. 11
	Accts. Merchants of NY	110.00	110
177	General Expense	17.50	
193	Individuals & Co	17.50	
Transferring amount of Bates Accts. Expense for month of July 1904 from Bates Accts. Rec. Ledger to General Ledger			
	Bates Accts. Rec.	125.35	4
	Bates Accts. Expense	125.35	2
177	General Expense	47.02	
193	Individuals & Co	47.02	
Amount of Cash Dividend allowed in prompt settlement of Bates Accts. Rec. during month of July 1904 as recorded in Cash Book of July 22 <sup>nd</sup> 1904 inclusive			
	Bates Accts. Rec.	47.02	4

Orange N.J. July 1908

198	Individuals & Co.	958	
179	General Expense		2.02
Amount of Cash Disbursements deducted in prompt settlement of Notes Payable during month of July 1908 as recorded in Cash Book & filed 95% 100% in memo.			
✓	Surplus		
179	Manufacturing	10,000.00	
Amount of Material Trans. frs. for month of July 1908 as recorded in Register of Disbursements filed in C. & S. charges to			
179	General Expense	2,000.00	
180	Machinery & Tools	1,000.00	
✓	Real Estate & Building	6.00	
✓	Manufacturing	8,000.00	
✓	Surplus		
198	Individuals & Co.	10,000.00	
Amount of Disbursements disbursed during month of July 1908 as recorded in Register of Disbursements filed in C. & S. both inclusive charges to			
✓	General Expense	10,000.00	
180	Machinery & Tools	1,000.00	
✓	Real Estate & Building	6.00	
179	Manufacturing	8,000.00	
198	Individuals & Co.	8,000.00	
✓	Surplus		
198	Individuals & Co.	8,000.00	
Amount of Sales for month of July 1908 as recorded in Abstract of Sales filed in C. & S. both inclusive to be credited as follows			
179	General Expense	10,000.00	
180	Sales	10,000.00	
179	Manufacturing	10,000.00	

Orange N.J. July 1908

198	Individuals & Co.	6,000.00	
✓	Surplus		
Gave this day Two Notes to A. Martin & Son @ 90 & 120 days respectively payable at Union National Bank Newark N.J. with interest @ 6% per annum			
179	Notes Payable	3,000.00	
✓	A. Martin & Son	3,000.00	
✓	"	3,000.00	
198	Individuals & Co.	3,000.00	
179	Notes Payable	3,000.00	
Gave this day our Note @ 60 days payable at Union Natl Bank Newark N.J. bearing interest at 6% per annum			
✓	Union Natl Bank & Foundry Co. & 3,000.00		
198	Machinery & Tools	1,000.00	
179	General Expense	1,000.00	
Correct error in distribution. R.M. Vanabro Jr may the above item charged to General Expense (Mfgs) instead Machinery & Tools			
37	Furniture & Fixtures	2,000.00	
179	General Expense	2,000.00	
Correct error in distribution. R.M. Vanabro Jr 129 March 1908 the above amount charged to General Expense instead Furniture & Fixtures			



## Orange N.J. August 1904

703	Bond Interest	2	720000	
704	Richard Bond Interest		720000	
	Amount of Bond Interest due this day on coupon # 14			
198	Individuals Co	300000		
	Sundries			
	Cash this day to A Weston & Son two acceptances due Oct 20 & 21 1904 respectively payable to Union Hall Bank Newark N.J. bearing interest at 6%			
774	Notes Payable		100000	
134			100000	
9	A Weston & Son 1000.00			
9	" " 1000.00			
10	N. B. Receivables	1000000		
155	Individuals Co	1000000		
	Received this day Note from National Phonograph Co due Dec 10 1904 at Union Hall Bank Newark N.J.			
2	National Phonograph Co 1000.00			
19	Notes Receivables	116000		
155	Individuals Co	116000		
	Received this day Note from Edison Phonograph Co dated Aug 19 1904 due Dec 20 1904 payable at Franklin National Bank Philadelphia Pa			
5	Edison Phonograph Co 1160.00			
193	Individuals Co	300000		
	Sundries			
	Cash this day two Notes to Bridgeport Brass Co a three & four months promissory note bearing interest at 6% payable at Union Hall Bank Newark N.J.			
134	Notes Payable		100000	
134			100000	
1	Bridgeport Brass Co 1500.00			
1	" " 1500.00			

## Orange N.J. August

165	Dividends	20	601000	
198	Individuals Co		601000	
	For a dividend of 1% per share on all the stock of the company entitled thereto payable August 25 1904			
107	Charles Batchelor 20000.00	div	210.00	
100	Wm L. A. Edison 461.75	"	52.50	
101	Henry Bamberlin 250.00	"	28.75	
100	Edmund S. Phillips 1430.00		172.50	
1	Thomas A. Edison 2536.20		2796.25	
100	John T. Randolph 10.00		15.00	
8	W. B. Silvers 163.00		203.25	
105	Oliver J. Wells 1.00		6.00	
101	Edm. Morrison 5.00		6.00	
	Dividends - 20			
190	Machinery & Tools		1520.00	
172	General Expenses		139.00	
	To correct error in distribution R. 251			
	Vouchers 251 \$ 14.00 May 1904			
	" 252 12.75			
	" 253 76.70			
	" 254 10.10			
	The above amounts were charged to General Expenses (modified) May 1904			
179	Manufacturing		2648.86	
179	Manufacturing		2648.86	
	To transfer amount standing to the debit of Spring Motors to this amount			
18	Phonograph 2648.86	Spring Motors		
154	Sales		6798.18	
154	Sales		6798.18	
	To transfer amount standing to the credit of Spring Motors account to Phonograph account			
46	Spring Motors 6798.18	Phonograph		



Orange 29 August 1904

154	Sales	1005.13	
154	Sales	1005.13	
154	To transfer Spring Water to Thomas & Co		
154	Spring Water	1005.13	
154	Thomas		
154	Manufacturing	278.80	
154	Manufacturing	278.80	
154	To transfer Spring Water to Thomas & Co		
154	Spring Water	278.80	
154	Thomas		
154	General Expenses	122.00	
154	Individuals & Co	122.00	
154	To transfer amount of Bates Cattle		
154	Expenses for month of August 1904		
154	from Bates Cattle Account to		
154	General Expenses		
154	Bates Cattle Rec. 122.00		
154	Bates Cattle Expenses 122.00		
154	Manufacturing	16.983.94	
154	Amount of Material Expenses for month of Aug		
154	and recorded in Register of Disbursements folios		
154	24 & 25 inclusive chargeable to		
154	General Expenses	382.996	
154	Machinery & Tools	200.25	
154	Manufacturing	128.4463	
154	Individuals & Co	21.2957	
154	Individuals		
154	Amount of Sales for month of		
154	August 1904 as recorded in Abstract		
154	of Sales folios 44 & 45 to be		
154	credited as follows:		
154	General Expenses	300.80	
154	Sales	99.18222	
154	Manufacturing	127.30	

Orange 29 August 1904

154	Individuals		
154	Individuals & Co	21.2957	
154	Amount of Disbursements transferred during		
154	August 1904 as recorded in Register		
154	of Disbursements folios 44 & 45		
154	inclusive chargeable to		
154	General Expenses	18.983.18	
154	Machinery & Tools	200.25	
154	Chal. Little & Building	266.76	
154	Insurance & Lumber	38.26	
154	Manufacturing	62.261.35	
154	Individuals & Co	21.2957	
154	Individuals		
154	General Expenses	300.80	
154	Individuals & Co	21.2957	
154	Amount of Cash Disbursements allowed in		
154	prompt settlement of Bates Cattle Rec		
154	during month of August 1904 as recorded		
154	in Cash Book "A" folios 101 to 112 inclusive		
154	Bates Cattle Rec. 307.20		
154	Individuals & Co	11.48	
154	General Expenses	11.48	
154	Amount of Cash Disbursements deducted		
154	in prompt settlement of Bates Cattle Rec		
154	during month of Aug 1904 as recorded		
154	in Cash Book "A" folios 112 to 113 inclusive		
154	inclusive		

Orange 29 September 1904

196	Individuals & Co.	49.00	
198	Individuals & Co.	49.00	
Brought this day note from Valentine Kling Co. at one month, payable at Merchants National Bank, New Haven, Conn.			
to balance their account to Sept 1 <sup>st</sup> 1904			
4	Ratio Accts. Rec.	49.75	
101	Ratio Notes Receivable	49.75	
1	Valentine Kling Co.	49.75	
4	Ratio Accts. Rec.	49.75	
195	Individuals & Co.	107.5	
197	Individuals & Co.	107.50	
To transfer the following amounts:			
6	Ratio Accts. Rec.	1904	Ratio Accts. Rec.
193	Morgan & Son	50	C. Marsh
3	Ratio Expenses	1909	Geo. W. Hawkins
2	"	601	Geo. W. Hawkins
3	Cash Sale	44	Schley Office Supply Co.
3	"	71	Geo. W. Hawkins
172	General Expense	1,000.00	
196	Individuals & Co.	1,000.00	
To transfer amount of Ratio Accts. Expense for month of September 1904 from Ratio Accts. Rec. to General Expense			
4	Ratio Accts. Rec.	100.75	
7	Ratio Accts. Expense	100.75	
173	General Expense	1,001	
196	Individuals & Co.	1,001	
Amount of Cash Disbursements allowed in prompt settlement of Ratio Accts. Rec. for month of September 1904 as recorded in Cash Book # 6 folio 112 to 119 both inclusive			
4	Ratio Accts. Rec.	100.75	

Orange 29 September 1904

198	Individuals & Co.	1,065	
171	General Expense	1,065	
Amount of Cash Disbursements deducted in settlement of Ratio Accts. Rec. during month of September 1904 as recorded in Cash Book # 6 folio 112 to 119			
198	Individuals & Co.	1,065	
1	Sundries	1,065	
Amount of Sales for month of September 1904 as recorded in Abstract of Sales folio 478 to 480 both inclusive to be credited as follows:			
178	General Expense	86.52	
180	Machinery & Tools	2.00	
176	Sales	141,906.58	
179	Manufacturing	3,002	
1	Sundries	30	
198	Individuals & Co.	87,466.61	
Amount of Disbursements recorded during month of September 1904 as recorded in Register of Disbursements folio 12 to 18 inclusive chargeable to:			
178	General Expense	16,100.70	
180	Machinery & Tools	21,551.11	
27	Real Estate & Building	976.00	
37	Furniture & Fixtures	2,660.55	
179	Manufacturing	67,512.98	
198	Individuals & Co.	104.00	
1	Sundries	20,568.38	
179	Manufacturing		
Amount of Material Transfers for month of September 1904 as recorded in Register of Disbursements folio 12 to 18 inclusive chargeable to:			
178	General Expense	1,371.72	
180	Machinery & Tools	1,211.19	
27	Real Estate & Building	11.19	
179	Manufacturing	17,844.27	



Orange N.J. October 1904.

[illegible]

Orange N.J. October 1904

✓	Sander's		
195		Individuals & Co.	12896.14
	Amount of Disbursements transferred during month of October 1914 as recorded in Register of Disbursements from 19 to both inclusive to be credited as follows:		
172	General Expense		18032.86
190	Machinery & Tools		4681.10
171	Rail Car & Building		1782.27
178	Manufacturing		100230.48
198	Individuals & Co.		6079.
✓	Sander's		
179		Manufacturing	25008.50
	Amount of Material Transfers for month of October 1914 as recorded in Register of Disbursements from 19 to 22 both inclusive chargeable to		
177	General Expense		7065.12
190	Machinery & Tools		1105.00
171	Rail Car & Building		98.69
178	Manufacturing		29,780.03
198	Individuals & Co.		17820.639
	Amount of Sales for month of October 1914 as recorded on Abstract of Sales from Oct 19 to 29 both inclusive to be credited as follows:		
177	General Expense		4728
171	Rail Car & Building		18.60
164	Sales		125,130.16
179	Manufacturing		11,350.
198	Individuals & Co.		6500
195		Individuals & Co.	6500
	To transfer the following accounts		
196	General Expense & Rail Car & Building		

Orange N.J. October 1904

37	Manufacture & Expense	777.83	
115	Ratio Manufacture & Expense		777.83
	To accumulate the above amounts		
140	Manufacturing Tools	29,224.91	
	Standardize		
	To accumulate the following amounts:		
99	New Phone & Electric Tools	4,427.78	
101	Fire Water Tools	1,860.44	
111	Ratio Manufacturing Manufacturing Tools	23,336.69	
8	Profit & Loss	69,072.76	
11	Standardize Profit & Loss		69,072.76
	To distribute Profit & Loss factory account carrying the amount on both as a value of one dollar under title of Miscellaneous Assets		
8	Profit & Loss	1,058,524	
1	Standardize		
	To clear out and distribute the following amounts carrying Ratio Manufacturing Tools stock as a balance of one dollar on the credit under title of Miscellaneous Assets		
95	Ratio Manufacturing Tools	15,866.66	
95	Stock	13,199.00	
95	Ratio Manufacturing Tools	12,500.00	
9	Profit & Loss	10,072.71	
115	Ratio Profit & Loss		10,072.71
	To distribute Ratio Profit & Loss to the accounts carrying the amount on the books as a value of one dollar under title of Miscellaneous Assets		
9	Profit & Loss	99,024.66	
20	Manufacturing Rights		99,024.66
	To distribute Manufacturing Rights account to amount standing to credit of Profit & Loss		

Orange N.J. October 1904

27	Miscellaneous Assets	3.00	
	Standardize		
	To transfer the following amounts to Miscellaneous Assets also		
95	Stock Account (Ratio)		1.00
110	Ratio Capital & Profit		1.00
11	Graphophone Factory		1.00

Orange N.Y. November 1904

198	Individuals & Co		110	
199	Individuals & Co		110	
To transfer the following items				
1	Bridgeport River Co. St. Chapman	106		
200	W.H. Thompson	106		
165	Dividend		6012.00	
198	Individuals & Co		6012.00	
For a dividend of 1% per share on all the stock of the company entered this date				
payable November 1, 1904				
107	Charles Bataillon	250000	210.50	
13	Wm. J. A. Edison	446,700	728.75	
101	Henry S. Barclayson	200,000	312.50	
100	International Telephone Co	1450,000	157.50	
1	Thomas A. Edison	2256,200	279.26	
100	Robert Randolph	10,000	17.50	
8	W.B. Gilman	163,000	202.75	
104	Oliver J. Tallis	5,000	6.25	
106	E.M. Morrison	5,000	6.25	
Dividend # 21				
198	Individuals & Co		510.75	
198	Individuals & Co		510.75	
To transfer the following accounts				
11	Proctor & Supply Co. 570 St. National House	7		
198	Individuals & Co		560	
198	Individuals & Co		560	
To transfer the following accounts				
100	National Phon Co.	300		
	Pathe Freres	107		
198	Individuals & Co		08	
198	Individuals & Co		08	
To transfer the following accounts				
10	Meigstetter Bros	8		
	Pathe Freres	103		

Orange N.Y. November 1904

173	General Expenses			
198	Individuals & Co		1200	
To transfer amount of Pathe Freres Extra Expenses during month of November 1904 from				
Pathe Freres to General Ledger				
4	Pathe Freres	1200		
2	Pathe Freres	1200		
173	General Expenses		1200	
198	Individuals & Co		1200	
Cash Dividends allowed Pathe Freres during month of November 1904 as recorded in Cash Book #1 folios 148 to 149				
4	Pathe Freres	1200		
198	Individuals & Co		1200	
173	General Expenses		1200	
Amount of Cash Dividends deducted in prompt settlement of Pathe Freres during month of November 1904 as recorded in Cash Book #1 folios 148 to 149 in column				
184	Sales		2894.75	
151	Sales		2894.75	
To consolidate Phon & Spring water accounts for month of November 1904				
4	Spring Water	2000		
198	Individuals & Co		163.60	
To transfer				
For amount of Sales for month of Nov 1904 as recorded in Statement of Sales folios 191 to 196 held as balance to be credited as follows				
173	General Expenses		1200	
190	Machinery & Tools		240	
27	Real Estate & Building		240	
151	Sales		163.60	
179	Manufactures		100.00	



Orange N.J. November 1904

1	Merchandise		
198	Individuals & Co.		150.00
	Amount of Disbursements for month of November 1904 as recorded in Register of Disbursements from 1st to 28th both inclusive chargeable to		
172	General Expense	2620.08	
190	Machinery & Tools	636.46	
27	Rail Estate & Buildings	276.29	
27	Furniture & Fixtures	4.90	
177	Manufacturing	1182.65	
198	Individuals & Co.	578.6	
1	Merchandise		
179	Manufacturing		36.88
	Amount of Material transferred for month of November 1904 as recorded in Register of Disbursements from 1st to 28th both inclusive chargeable to		
172	General Expense	596.02	
190	Machinery & Tools	1.02	
27	Rail Estate & Buildings	275.93	
179	Manufacturing	290.63	
179	Manufacturing	28.77	
129	Manufacturing		24.77
15	To consolidate the following accounts		
	Phone 2475 to Spring Motor 154		

Orange N.J. December 1904

56	Notes Receivable		
198	Individuals & Co.	150.00	
	To Credit National Phone Co. with Note dated Dec 12 <sup>th</sup> 1904 at four month payable at Union Natl Bank Newark N.J.		150.00
2	National Phone Co.	150.00	
56	Notes Receivable		
198	Individuals & Co.	1185.00	
	Received this day Note from Ed Edison Portland Cement Co. dated December 12 <sup>th</sup> 1904. Due April 27 <sup>th</sup> 1905 payable at Franklin Natl Bank Phila. Pa.		1185.00
5	Edison Portland Cement Co.	1185.00	
173	General Expense		
198	Individuals & Co.	100.00	
	Transferring amount of Batts Extra Expense for month of December 1904 from Batts Accts Rec. Ledger to General Ledger		100.00
4	Batts Accts Rec.	100.00	
2	Batts Extra Expense	100.00	
198	Individuals & Co.	470.00	
198	Individuals & Co.		470.00
	To transfer the above amount from Individuals & Co. Ledger to Batts Accts Rec. Ledger		
109	Bank of New York & Co.	420.00	
	Batts Accts Rec. 420.00		
198	Individuals & Co.		
198	Individuals & Co.	67.13	
	To transfer the following accounts		
4	Batts Accts Rec.	67.13	
109	National Phone Co. Ind. Co. 67.13		

Orange, December 1904.

170	General Expense	31	70.80	
171	Individuals & Co		70.80	
	Amount of Cash Disbursements allowed in prompt settlement of Bates Accts for month of December 1904 as recorded in Cash Book #6 folios 151-152			
172	Bates Accts Rec.	788		
173	Individuals & Co		1670	
	General Expense			
	Amount of Cash Disbursements deducted in prompt settlement of Accts Payable during month of December 1904 as recorded in Cash Book #6 folios 156 to 163 inclusive			
173	General Expense	31	1400	
190	Machinery & Tools		1400	
	In Council Journal Entry in July '04 error in distribution of March \$221 may as same is corrected by Journal entry in August (change profit?)			
198	Individuals & Co	31	186781.94	
	Sundries			
	For amount of Sales for month of December 1904 as recorded in Abstract of Sales folios 497 to 570 both inclusive to be credited as follows			
173	General Expense		224.89	
174	Sales		186278.90	
179	Manufacturing		178.15	
174	Sales	31	2406.54	
174	Sales		2406.54	
	Sales			
	In consolidated Phone & Spring Motor accounts for month of December 1904			
175	Spring Motor & Phone	31		

Orange, December 1904.

✓	Sundries	31		
179	Manufacturing		37977.40	
	Amount of Material Transfers for month of December 1904 as recorded in Register of Disbursements folios 51 to 51, incl			
	Chargeable to			
173	General Expense		89.06	
190	Machinery & Tools		260.15	
171	Real Estate & Building		193.45	
172	Furniture & Fixtures		1.35	
179	Manufacturing		306.16	
179	Manufacturing		195.45	
179	Manufacturing		195.45	
	In consolidated Spring Motor & Phone month of December 1904			
18	Phone	1904-24 Spring Motor	157	
✓	Sundries			
199	Individuals & Co		165683.36	
	Amount of Disbursements for month of December 1904 as recorded in Register of Disbursements folios 54 to 54, inclusive is chargeable to			
173	General Expense		295.54	
190	Machinery & Tools		3446.78	
171	Real Estate & Building		228.59	
172	Furniture & Fixtures		25.07	
179	Manufacturing		120313.90	
198	Individuals & Co		57.15	



Orange 22<sup>nd</sup> January 1905

199	Individuals & Co	37 90	37 90
199	Individuals & Co		
Revised this day from Valentine Stamp Co. at one month payable at Merchants National Bank New Haven Ct. to balance this amount to Dec 31 1904			
4	Bates Accts Rec	37 90	
101	Bates Motor Receivable	37 90	
1	Valentine Stamp Co	37 90	
4	Bates Accts Rec	37 90	
173	General Expense	27 01	27 01
199	Individuals & Co		
Amount of each Dividend allowed in prompt settlement of Bates Accts Rec during month of January 1905 as recorded in Cash Book #6 folios 148 to 151 inclusive			
4	Bates Accts Rec	27 01	
173	General Expense	100 00	100 00
199	Individuals & Co		
Transferring amount of Bates Accts Rec for month of January 1905 from Bates Accts Rec ledger to General Ledger			
4	Bates Accts Rec	100 00	
7	Bates Contra Expense	100 00	
199	Individuals & Co	89 50	89 50
173	General Expense		
Amount of Cash Dividends deducted in prompt settlement of Accts Payable during month of January 1905 as recorded in Cash Book #6 folios 152 to 155 inclusive			
151	Sales	2294 15	2294 15
150	Sales		
To consolidate Phoenix & Spring Motor accounts for month of January 1905			
46	Spring Motor	2294 15	3

Orange 22<sup>nd</sup> January 1905

199	Individuals & Co	36 55	36 55
199	Individuals & Co		
To transfer the following accounts			
4	Bates Accts Rec	36 55	Bates Accts Rec 4
10	R. D. Coleman	3	Surplus 3
137	Salisbury Pottery Co	10	" 1
7	M. Shafter Smart Co	79	" 1
50	Flour Roberts	50	" 1
118	Pringle Mangled Book Co	10	" 1
114	Marshall Motor Co	10	" 1
3	Surplus	135	Smith & Thomas 106
3	"	16 00	Bass & Schuman 136
10	Quess Zephonbury Co	80	Quess Zephonbury Co 106 1
115	T. G. Blair & Co	60	Surplus 3 1
131	H. T. Beckmiller	600	" 1
107	Carr Bros	9 58	" 1
107	Citizens Natl Bank	58	" 1
106	De Maria Lj. Inc	15	" 1
107	Edwards & Smith Co	19	" 1
108	Edwards & Smith Co	11	" 1
105	Ryan & Smith	25	" 1
110	Sperry & Hapman	12	" 1
114	Sales		
114	Sales	1024 60	1024 60
To correct error in distribution so abstract of Sales of Phoenix sold up to R. D. Williams & Co. Canada during month of November & December 1904			
3	Phoenix	1024 60	
	Cash	952 7	70
	Spring Motor	72 01	40
Sales			
100	Sam Phoenix	684	684
30	St.	178	116
13	Home	239	239
19	St.	238	182
Spring Motor			
19	St. Phoenix	237	72 01

Orange 27 of January 1905

199	Individuals & Co	174804.77
	✓ <u>Scoundries</u>	
	For amount of Sales for current month as recorded in Abstract of Sales folios 57 to 57 inclusive to be credited as follows	
173	General Expense	78.32
174	Sales	118857.67
179	Manufacturing	586877
179	Manufacturing	43998
173	General Expense	63998
	To correct error in distribution in R.M. Vouchers as specified below. The above amount was charged to General Expense (omit) instead of Tax	
163	Tax	439.25
1/16	196 lbs Aluminum	\$78.40
1/16	198 "	78.40
1/16	344 "	176
1/16	198 "	477.75
1/16	200 "	116.44
1/16	300 "	117.88
	✓ <u>Scoundries</u>	
199	Individuals & Co	91378.35
	Amount of Disbursements for month of January 1905 as provided in Register of Disbursements folios 42 to 47 inclusive & chargeable to	
173	General Expense	26260.78
190	Machinery & Tools	475.82
28	Real Estate & Buildings	10053.26
37	Furniture & Fixtures	6223
179	Manufacturing	67469.96
199	Individuals & Co	6010

Orange 27 of January 1905

✓ <u>Scoundries</u>	31	
179	Manufacturing	26639.11
	Amount of Material Transfers for month of January 1905 as recorded in Register of Disbursements folios 42 to 47 inclusive chargeable to	
173	General Expense	4177.32
190	Machinery & Tools	68.33
28	Real Estate & Buildings	132.63
37	Furniture & Fixtures	74
179	Manufacturing	27860.09
179	Manufacturing	1198.48
179	Manufacturing	1198.48
	To consolidate Spring Month & Thom for month of January 1905	
18	Thom	1198.48
	Spring motor 152	

Orange N.J. February 1901

199	Individuals & Co	9	62.00	
199	Individuals & Co			62.00
	Received this day Note from Valentius Stang Co. & one month payable at the Merchants National Bank New Haven Conn in payment of this December account.			
4	Bates Accts Rec	62.00		
101	Bates Notes Receivable	62.00		
6	Bates Accts Rec	62.00		
1	Valentius Stang Co	62.00		
		20		
165	Dividend		6018.00	
199	Individuals & Co			6018.00
	Paid dividend of 1 <sup>st</sup> per share on all the stock of the company entitled thereto payable February 20 <sup>th</sup> 1901			
107	Charles Batchelder	2484.40 @ 1 <sup>st</sup>	310.00	
13	Mr Thomas Addison	4467.45	582.44	
101	Henry G. Archibald	250.00	312.50	
108	International Supply Co	1430.00	1787.50	
1	Thomas Addison	2246.210	2795.26	
100	John F. Randolph	10.000	12.50	
4	W. B. Sillmore	160.000	202.50	
105	Oliver J. Wells	5.000	6.25	
104	S. M. Harrison	5.000	6.25	
	Dividend # 22			
		28		
199	Individuals & Co		8.67	
199	Individuals & Co			8.67
	To transfer the following accounts			
12	J. S. Buck Mfg Co	6.57		
4	A. A. Weeks	2.00		
1	Bates Accts Rec	8.57		
1	J. S. Buck Mfg Co	6.57		
9	A. A. Weeks	2.00		

Orange N.J. February 1901

199	Individuals & Co	28		
199	Individuals & Co		1065	1065
	To transfer the following accounts			
4	National Phone Co	10.65		
100	Bates Accts Rec	10.65		
	National Phone Co	10.65		
		28		
199	Individuals & Co		994	
199	Individuals & Co			994
	To transfer the following accounts			
4	Bates Accts Rec	994	Bates Accts Rec	4
3	Swapsense	4.5	Iron Brothers Supply Co	107
107	Iron Brothers Supply Co	4.5	Th. A. B. Elliot & Sons	107
107	Ames Wood Working Mfg Co	39	Swapsense	3
3	Swapsense	18	Swapsense	113
11	"	23	Gyler & Smith	106
11	"	29	C. B. Miller	104
11	"	11	C. M. MacClung & Son	104
		28		
173	General Expense		125.00	
199	Individuals & Co			125.00
	Transferring amount of Bates Extra Expense for month of Feb 1901 from Bates Accts Rec to General Expense			
4	Bates Accts Rec	125.00		
7	Bates Extra Expense	125.00		
		28		
173	General Expense		57.25	
199	Individuals & Co			57.25
	Amount of Cash Dividend allowed in prompt settlement of Bates Accts Rec during month of February 1901 as recorded in Cash Book * 7.25 per 100			
4	Bates Accts Rec	57.25		
		28		
103	Bond Interest		6900.00	
104	Unpaid Bond Interest			6900.00
	Amount of Bond Interest due this day on coupon # 15			

Orange N.J. February 1905

199	Individuals Co	25		
173	General Expense	25.77	25.77	
Amount of Cash Dividend deducted in month settlement of Assets Payable during month of February 1905 and recorded in Cash Book #7 folio 157				
199	Individuals Co	26.2	26.2	
199	Individuals Co			
To transfer the following accounts				
706	W. Brewster	1.00	Expense	106 ✓
706	O. Bunker	1.00		106 ✓
106	Expense	3.08	J. H. Klump & Sons	2 ✓
106	"	01	Fred Hart Co	2 ✓
706	J. Mullin	1.00	Expense	106 ✓
106	John Smith & Co	05		106 ✓
706	W. Steeper	1.00	"	106 ✓
106	Expense	25	W. H. Thompson	101 ✓
106	"	215	W. H. Hudson-Wentworth	700
150	Philip Snyder	10	Cash Sale	14 ✓
1	Manufacture following 05	Expense		106 ✓
199	Individuals Co			
199	Indiv Co	25.00	25.00	
To transfer the following accounts				
7	Edwin May Co.	25.00	May Wrightman	70
199	Individuals Co			
199	Individuals Co	120.86	120.86	
To transfer the following accounts				
4	Bates Auto Rec.	120.86	Bates Auto Rec.	4
3	Expense	27.25	Robert Hart Bates Co	207
"	"	1.18	Congress Baker & Co	217
"	"	1.75	Grant Tool Co	102
"	"	1.95	J. B. Antlerman Co	217
"	"	76.64	Clark Ink Co	200

Orange N.J. February 1905

199	Individuals Co	924	924	
199	Individuals Co			
To transfer the following items				
4	Bates Auto Rec.	9.24	Bates Auto Rec.	4
3	Expense	9.24	Carr Bros	107
199	Individuals Co			
199	Individuals Co	404.6	404.6	
To transfer the following accounts				
50	W. H. Williams	46	Cash Sale	14 ✓
1	W. H. Jones Co	400.00	C. B. Witt	207
8	Profit & Loss	38.17	200	
To write off the following accounts				
703	Bond Interest	14.100		14.10000
165	Resident Account	240.7200		240.7200
199	Manufacturing	114.74	114.74	
173	General Expense			
To correct error in distribution on banks memo from 1901. 100000 Aluminum 29.20% charged to General Expense (Witt) initial Witt				
163	Witt	114.74		
8	Profit & Loss	29	29	
199	Individuals Co			
To write off expense amount for fiscal year ending July 28/05				
106	Expense	29		
8	Profit & Loss	186.17	186.17	
199	Individuals Co			
To write off amount of Bates expense for fiscal year ending July 28/05				
4	Bates Auto Rec.	186.17		
3	Bates Expense	186.17		

Orange, February 1905

185	Uncollected Notes	28		4.55	
9	Profit & Loss				4.55
	To write off the above amount	28			
186	Sales		2297.56		2297.56
	To consolidate Spring Motor & Phone				
	for month of February 1905				
187	Spring Motor \$292.86 Phone	3			
	Sundries	28			
179	Manufacturing		21799.11		
	Amount of material transferred for month				
	of Feb'y 1905 as recorded in Register of				
	Disbursements July 18 to 28 inclusive				
	chargeable to				
178	General Expense		8773.12		
190	Waghs & Tools		140.59		
98	Real Estate & Building		5.96		
37	Furniture & Fixtures		64.83		
179	Manufacturing		16815.51		
	Sundries	28			
179	Individuals & Co.		99676.91		
	Amount of Disbursements incurred during				
	July 1905 as recorded in Reg. of Disb. July				
	July 18 to 28 inclusive chargeable to				
178	General Expense		2461.056		
190	Waghs & Tools		497.74		
98	Real Estate & Building		45.91		
37	Furniture & Fixtures		40.52		
179	Manufacturing		73924.11		
179	Individuals & Co.		119.69		
9	Profit & Loss	28			
98	Real Estate & Building		50000	50000	
	Transfer out the old carpenter shop				
	known as building "9" same				
	having been torn down				

173	General Expense	28			
28	Real Estate & Building		1000	1000	
	To correct error in distribution				
	under "So Aug 1904" same should				
	be charged to "B" instead of "B.C."				
179	Manufacturing		159272	159272	
179	Manufacturing				
	To consolidate Phone & Spring Motor				
	accounts for February 1905				
18	Phone	192.72			192
	Spring Motor				
	Individuals & Co.	28			
	Sundries		13395.430		
	Amount of sales for February 1905				
	as recorded in Abstract of Sales				
	July 18 to 28, to be credited as				
	follows:				
178	General Expense		27698		
179	Sales		13366.663		
179	Manufacturing		1069		
	Manufacturing	28			
179	Real Estate & Building		30.28	30.28	
	To transfer above amount distributed on				
	books, 18 July 1905 to A.C. & B. instead				
	of Raw Material				
172	Raw Material	20			
190	Automobile	28	2001.50	2001.50	
173	General Expense				
	To correct error in distribution on Disb. 20 Aug				
	for carrying automobile entry same was distributed				
	to General Exp. (entry) instead Automobile amount				
709	Sales		10673.88	10673.88	
219	Sales				
	To credit Phone & Co. with amount of scrap sold				
	during fiscal year ending July 26/05				
103	Scrap	10673.88			
	Phone	23			

Orange 74 February 1901

199	Individuals to	28	18.00	
173	General Expense		18.00	
	For amount of second distribution for month of February 1901 as recorded in Register of Disbursements folio 54.			
1	Indrean			
174	Manufacturing		13979.64	
	For amount of second distribution for month of February 1901 as recorded in Register of Disbursements folio 54.			
173	General Expense		50.20 1/2	
179	Manufacturing		89.49 1/2	
179	Manufacturing		10.633 87	
173	General Expense		106.33 87	
	To transfer expenses directly charged to Rte. Manufacturing Co. business			
31	Automatic Handing Machines		10.633 87	
179	Manufacturing		7.557.85	
	General Expense		7.557.85	
	To transfer amount standing to the credit of Box Factory to the credit of General Expense			
167	Box Factory		7.557.85	
179	Manufacturing		1570.518	
179	Manufacturing		1570.518	
	To transfer amount standing to the credit of Japanning to the credit of Phone etc			
173	Japanning		15.105 1/2	
	Phone		18	
160	Manufacturing		3160.92	
180	Manufacturing		3160.92	
	For amount of third distribution for month of February 1901 as recorded in Register of Disbursements folio 54.			

Orange 74 February 1901

180	Manufacturing	28		
180	Manufacturing		1867.45	
	To transfer to make Raw Material equal inventory			
18	Phone		5867 1/2	
	Raw Material		173	
8	Profit & Loss		32.88 1/2	
28	Real Estate Building		32.88 1/2	
	To wipe out the portion of Building No. 10 which was torn down to make room for New Power House			
8	Profit & Loss		220.00	
28	Real Estate Building		220.00	
	To wipe out Building No. 8-12-14-16 same having been torn down			
	Building # 8		150.00	
	" 13		40.00	
	" 14		15.00	
	" 15		15.00	
180	Manufacturing		28981.511	
173	General Expense		28981.511	
	To distribute pro rata General Expense over the following accounts:			
	LTW	56%	Amount	
18	Photograph	441282.06	33.202	153.157.04
32	Auto. H. Machine	29799.24		98.945.08
163	Truck	206335.01		68.575.72
144	Miscellaneous	24350.51		8061.88
127	Raw Material	5527.12		1171.29
170	Tray Tinsels	13171.16		4373.15
167	Labnisk	124273.77		44583.20
		572872.17		28981.511

Orange, N.J. February 25/05

1909	Sales	1153209.75
1910	Manufacturing	1183209.75
To transfer cost of sales of the following accounts for fiscal year ending July 1905		
8	Photographs	616.618.55 18
15	Auto. M <sup>c</sup> Mach	47997.59 31
67	Rates Merchandise	2442.75 117
9	Nov	278985.55 163
97	Miscellaneous	31827.95 142
106	Faw Motor	3511.90 134
39	Proj. Kinet	17153.59 170
57	Material Sales	3251.49 168
70	Cabinet	186726.97 137
		1153209.75

1909	Sales	1105095.6
1910	Individuals & Co	1105095.6
To credit Natl. Phone Co with amount made profit on Phone. 77 was accounts equal 10% of labor Material plus Bureau Expense & Depreciation as per understatement		
	7700	Reduction Net 15%
	Phone	711552.50 95236.12 616616.65 92493.52
	Nov.	292929.20 22953.75 278985.55 41097.53
		1008772.70 118159.54 890622.28 133890.38

Prof. & adv. by Natl. Phone Co 205813.22  
 Nov. 66061.97 278985.55  
 2 Credit National Phone Co 190809.56  
 3 Photographs 110320.75  
 9 Nov 26989.14

Orange, N.J. February 28/05

1909	Sales	152652.83
8	Profit & Loss	152652.83
To profits realized on the following accounts during fiscal year ending Feb. 28-1905		
3	Photograph	92492.50
9	Nov	41097.53
15	Auto. M <sup>c</sup> Machines	17584.10
57	Miscellaneous	4767.07
39	Proj. Kinet	332.38
57	Material Sales	695.57
67	Rates Merchandise	1143.65
70	Cabinet	3753.38
106	Faw Motor	1115.93

Orange N.J. March 1905

173	General Expense	31		
199	Individuals Co		100.00	✓ 100.00
	Transferring amount of Bates Auto Expense for month of March 1905 for Bates Auto Rec.			
	Lodge & Dinner Salary			
4	Bates Auto Rec	1.00.00		
✓	Bates Auto Expense	1.00.00		
173	General Expense	1		
199	Individuals Co		77.60	✓ 77.60
	Amount of Cash Discounts allowed on prompt settlement of Bates Auto Rec during month of March 1905 as recorded in Cash Book by John S. & W. Dickinson			
4	Bates Auto Rec	77.60		
199	Individuals Co		15.80	✓ 15.80
173	General Expense			
	Amount of Cash Discounts deducted on prompt settlement of Accts Payable during month of March 1905 as recorded in Cash Book by John S. & W. Dickinson			
199	Individuals Co		1189.5890	
✓	Individuals Co			
	For amount of Sales during month of March 1905 as recorded in Abstract of Sales by John S. & W. Dickinson as follows			
173	General Expense		✓ 41.79	
199	Sales		✓ 156.80909	
180	Manufacturing		✓ 9.72	
199	Sales		3898.468	
✓	Sales		3898.46	
	2 candidates spring water & Phone accounts for month of March 1905			
4	Spring Water 249.46	Phone	4	



Orange N.J. March 1905

✓	Sundries	31	
199	Individuals & Co.	129.268.61	
	Amount of disbursements recorded during month of March 1905 as recorded in Register of disbursements filed 55 to be included as charges to		
73	General Expense	20.924.76V	
191	Machinery & Tools	16.224.37V	
28	Rail Carrots & Rebuilding	2.254.61V	
37	Furniture & Fixtures	27.31.08V	
150	Manufacturing	10.626.89V	
199	Individuals & Co.	76.55V	
✓	Sundries		
150	Manufacturing	4.229.58V	
	For amount of material transferred/mailed during month of March 1905 as recorded in Register of disbursements filed 55 to be included as charges to		
73	General Expense	6.220.92V	
191	Machinery & Tools	2.244V	
28	Rail Carrots & Rebuilding	30.88V	
37	Furniture & Fixtures	176V	
150	Manufacturing	26.619.45V	
150	Manufacturing	26.727.6X	
150	Manufacturing	X 26.927.6	
	To credit of Spring Meter & Chemicals for month of March 1905		
19	Phone	2692.76 Spring Meter	150.

Orange N.J. April 1905

56	Notes Receivable	3	
199	Individuals & Co.	1212.00V	1212.00
	Received this day Note from Ed. Edison Portland Cement Co. dated April 30 1905 due Aug 29 1905 payable at Franklin Natl Bank Philadelphia Pa.		
5	Edison Portland Cement Co.	1212.00	
199	Individuals & Co.	20	
199	Individuals & Co.	44.57.1	44.57V
	Received this day Note from Valentine's Stamp Co. @ one month due May 29 1905 at the Merchants National Bank New Haven Conn. To balance this date March 14 1905		
14	Notes Assets Rec.	44.57V	
101	Notes Notes Receivable	44.57V	
14	Notes Assets Rec.	44.57V	
19	Valentine's Stamp Co.	44.57V	
30			
199	Index & Co.	60V	
199	Index & Co.	60	
	To transfer the following accounts		
14	Notes Assets Rec.	60	
20	Lake Shore & Michigan So Ry Co.	30 Lake Shore & Mich So Ry Co. St	
28	The Jernett Chemical Co.	30 The Jernett Chemical Co. St	
199	Individuals & Co.		
199	Individuals & Co.	244V	244V
	To transfer the following accounts		
14	Notes Assets Rec.	344	
56	Notes Assets Rec.	59 Atlantic Coast Notes Co. NY	
7	United States Government	17X I. P. Tade	50.
3	Insurance	100 Troy Rubber Stamp Co. St	
199	Individuals & Co.		
199	Individuals & Co.	111.1	111.1
	To transfer the following accounts		
5	Edison Portland Cement Co.	111.1 Edison Storage Battery Co.	



Orange 24<sup>th</sup> May 1900

160	Dividend	20	6018.00 ✓	6018.00
200	Individuals & Co			
	For a dividend of 15¢ per share on all the stock of the Company entitled thereto payable May 20 <sup>th</sup> 1900			
101	Charles Ratchler	2484.40 ✓	124.2105 ✓	
13	M. L. Edison	4667.50 ✓	233.375 ✓	
101	Henry B. Ambrose	750.000 ✓	37.500 ✓	
100	International Telegraph Co	1420.000 ✓	71.000 ✓	
1	Thomas J. Edison	2231.210 ✓	111.560 ✓	
3	John F. Randolph	10000 ✓	500.00 ✓	
8	W. S. Edwards	160.000 ✓	8.000 ✓	
105	Oliver J. Wells	5.000 ✓	.250 ✓	
106	E. W. Harrison	5.000 ✓	.250 ✓	
17	J. P. Schermerhorn	5.000 ✓	.250 ✓	
	Dividend * 20			
170	General Expense	31	155.00 ✓	155.00
200	Individuals & Co			
	Transferring amount of Bates & Co Expense from Bates & Co Rec Ledger to General Ledger			
4	Bates & Co Rec	155.00		
7	Bates & Co Expense	155.00		
200	Individuals & Co			
200	Individuals & Co			
	To transfer the following amount			
17	National Phone Co	1.17		
	Bates & Co Rec	1.17		
	National Phone Co	1.17		
170	General Expense	31	572.84 ✓	572.84
200	Individuals & Co			
	Amount of Cash Dividend allowed on settlement of Bates & Co Rec during month of May 1900 as recorded on Cash Book 27 folios 22 to 29 inclusive			
4	Bates & Co Rec	572.84		

Orange 24<sup>th</sup> May 1900

200	Individuals & Co	31	1018.5 ✓	1018.5
170	General Expense			
	Amount of Cash Dividend deducted on settlement of Accounts Payable during month of May 1900 as recorded on Cash Book 27 folios 22 to 29 inclusive			
1	Dividend	31		
200	Individuals & Co			
	Amount of Disbursements recorded during month of May 1900 as recorded in Register of Disbursements folios 28 to 74 inclusive chargeable to			
170	General Expense		24,442.78 ✓	
28	Bates & Co Building		744.41 ✓	
191	Machinery & Tools		1,326.60 ✓	
180	Manufacturing		84,107.67 ✓	
200	Individuals & Co		70.57 ✓	
1	Dividend	31		
180	Manufacturing			
	Amount of Material Transfers for month of May 1900 as recorded in Register of Disbursements folios 74 chargeable to			
170	General Expense		38,760.37 ✓	
28	Bates & Co Building		611.4 ✓	
191	Machinery & Tools		157.7 ✓	
180	Manufacturing		19,067.87 ✓	
200	Individuals & Co			
1	Dividend	31		
	For amount of bills entered on Abstract of Sales folios 20 to 31 inclusive during month of May 1900 and to be credited as follows			
170	General Expense			51.87 ✓
209	Sales			15,546.80 ✓
180	Manufacturing			39.33 ✓

Orange of May 1905

180	Manufacturing	31	1636.86X	
180	Manufacturing		X 1636.86	
	To consolidate Spring Motor & Phono of month of May 1905			
19	Phono	1636.38	Spring Motor	180
209	Sales	"		
209	Sales		1336.68X	
	To consolidate Spring Motor & Phono of month of May 1905			
141	Spring Motor	1336.68	Phono	141

Orange of June 1905

700	Individuals Co	30		
700	Individuals Co		240V	240
	To transfer the following accounts			
14	Bates Accts Rec	240	Bates Accts Rec	4
145	Marshall Field Co	20	Shropshire	3
6	Insurance House Dept	240	Office of Insurance	205
700	Individuals Co			
700	Individuals Co		20V	20
	To transfer the following accounts			
14	Bates Accts Rec	20		
139	Dr Shrop Family Medical Co	20		
310	Dr Shrop Family Medical Co	20		
173	General Expenses			
700	Individuals Co		60.61V	60.61
	Amount of Cash Disbursements deducted in prompt settlement of Bates Accts Rec during month of June 1905 as recorded in Cash Book #7, folio 34 to 36 inclusive			
14	Bates Accts Rec	\$ 60.61		
700	Individuals Co			
174	General Expenses		79.01V	79.01
	Amount of Cash Disbursements deducted in prompt settlement of Bates Accts Rec during month of June 1905 as recorded in Cash Book #7, folio 34 to 36 inclusive			
700	Indiv & Co		20.15V	20.15
700	Indiv & Co		V	20.15
	To transfer the following amount			
7	Fred Rice	20.15	North Phono Co	71
700	Individuals Co			
700	Individuals Co		38.62V	38.62
	To transfer the above amount			
71	National Phono Co	38.62	Madison & Co	1

June 30/05

174	General Expense	Individuals & Co	10000/-	
180	Transferring amount of Bates Extra Expense for month of June 1905 from Bates Extra Acc to General Ledger		✓	10000/-
18	Bates Extra Rec	100.00		
✓	Bates Extra Expense	100.00		
✓	Landre's			
180	Manufacturing		✓	18980.37
	Amount of Material drawn for Standard during month of June 1905 as recorded in folio 74 & 85 inclusive chargeable to			
174	General Expense	400.39	✓	
191	Machinery & Tools	1.88	✓	
18	Real Estate & Buildings	1.85	✓	
180	Manufacturing	14.95	✓	28.1
✓	Landre's			
180	Individuals & Co		✓	2111.24
	Amount of Disbursements Standard during June 1905 as recorded in Register of Disbursements folio 75 to 84 inclusive chargeable to			
174	General Expense	20.07	✓	29.1
191	Machinery & Tools	38.13	✓	
18	Real Estate & Buildings	48.61	✓	
30	Furniture & Fixtures	6.00	✓	
180	Manufacturing	70.00	✓	68.1
180	Individuals & Co	5.85	✓	
180	Manufacturing		✓	1943.77
180	Manufacturing		✓	1943.77
	Consolidated Spring Motor & Phone accounts for month of June 1905			
19	Phone	1943.77	✓	Spring Motor 180

Orange, N.J. June 1905

300	Individuals & Co	Landre's	8465.79	✓
	For amount of bills entered in Abstract of Sales folio 86 to 88 inclusive during month of June 1905			
174	General Expense		✓	13.58
189	Sales		✓	807.15
180	Manufacturing		✓	400.70
✓	Landre's			
189	Sales		20.69	2X
189	Sales		✓	200.19
	Consolidated Spring Motor & Phone acct for month of June 1905			
46	Spring Motor	20.69	✓	Phone

Orange N.J. July 1905

174	General Expense	12	45.4	
1700	Individuals & Co.		✓	45
	D. credit Jos Dixon Crumville Co. with cash disbursements deducted June 22 <sup>nd</sup> 1905 but not allowed			
1	Joseph Dixon Crumville Co.	45.4		
1700	Individuals & Co.		45.4	
174	General Expense		✓	45
	To correct distribution of petty cash for June 27 <sup>th</sup> 1905 transfer to 17 June			
1	Joseph Dixon Crumville Co.	45.4		
1700	Individuals & Co.	31	90.4	
1700	Individuals & Co.		✓	90
	To transfer the following amount from National Bank to Wicks Bank			
17	National Home Co.	90.4	✓	90.4
1700	Individuals & Co.		49.4	
1700	Individuals & Co.		✓	49
	To transfer the following amounts			
4	Bates Accts Rec	49	✓	49
174	William Ford Co.	49	✓	49
174	General Expense		✓	36.35
1700	Individuals & Co.		✓	36.35
	Amount of Cash Disbursements allowed in prompt settlement of Bates Accts Rec during month of July 1905 as recorded in Cash Book July 31 to 43			
4	Bates Accts Rec	36.35		
174	General Expense		✓	100.00
1700	Individuals & Co.		✓	100.00
	Transferring amount of Bates Extra Expense for month of July 1905 from Bates Accts Rec to General Expense			
4	Bates Accts Rec	\$100.00		
2	Bates Extra Expense	\$100.00		

Orange N.J. July 1905

1700	Individuals & Co.	31	85.20	71.1
	For amount of Sales for month of July 1905 as recorded in Abstract of Sales July 31 and to be credited as follows			
174	General Expense		✓	1072.15
174	Sales		✓	802.23
150	Manufacturing		✓	77.90
191	Machinery & Tools		✓	57.85
174	Sales		1187.46	
174	Sales		✓	1187.46
	To consolidate Spring Motor & Home accounts for month of July 1905			
4	Spring Motor	1187.46	✓	
1700	Individuals & Co.		483.13	
174	General Expense		✓	483.13
	Amount of Cash Disbursements deducted in prompt settlement of Bates Payable during month of July 1905 as recorded in Cash Book July 31 to 38 inclusive			
1	Cash		✓	1877.63
1700	Individuals & Co.		195.65	
174	General Expense		✓	257.77
191	Machinery & Tools		✓	96.56
150	Manufacturing		✓	649.83
1700	Individuals & Co.		✓	37.91



Orange 29 August 1905

174	General Expense	31	42804	
700	Individuals & Co.			4080
	For amount of cash disbursements allowed in prompt settlement of Bates Accts Payable during month of August 1905 as recorded in Cash Book #7 folio 65 to 71 inclusive			
✓ 11	Bates Accts Rec	# 40 50x		
174	General Expense	31	115004	
700	Individuals & Co.			12500
	Transferring amount of Bates Accts Expense for month of August 1905 from Bates Accts Rec to General Ledger			
✓ 14	Bates Accts Rec	125-00		
✓ 2	Bates Accts Expense	125-00		
700	Individuals & Co.	31	60004	
700	Individuals & Co.			6000
	To transfer cash charged to Mallory for May Co. shoes have been charged to Thomas A Edison as per check May 26-1905			
✓ 1	Thomas A Edison	# 60.75 Mallory for May Co. 27.		
700	Individuals & Co.	"	371184	
174	General Expense			37118
	Amount of Cash disbursements deducted in prompt settlement of Accounts Payable during month of August 1905 as recorded in Cash Book, folio 65 to 67 inclusive			
700	Individuals & Co.	"	109208344	
	The amount of sales during month of August 1905 as recorded in Abstract of Sales folio 59, and to be credited as follows			
174	General Expense		✓ 72761	
19	Machinery & Tools		✓ 11810	
700	Sales		✓ 111044636	
180	Manufacturing		✓ 1809	

Orange August 1905

180	Manufacturing	31		
180	Manufacturing		1046684	
	To consolidate Spring Motor & Thompson for month of August 1905			
✓ 19	Phone	104668 Spring Motor	140	
✓ 200	Individuals & Co.			111107793
	For amount of bills rendered during month of August 1905 as recorded in Register of Disbursements folio 92 to 100 chargeable to			
174	General Expense		22555461	
19	Machinery & Tools		2555461	
28	Railroads & Building		70775	
31	Furniture & Fixtures		491504	
180	Manufacturing		8529404	
200	Individuals & Co.		23604	
✓ 180	Manufacturing			2770147
	For amount of New Material rendered during month of August 1905 as recorded in Register of Disbursements folio 92 to 100 chargeable to			
174	General Expense		8957494	
19	Machinery & Tools		2891	
28	Railroads & Building		6501	
180	Manufacturing		18904411	



Orange 22 Sept 1905

700	Individuals & Cos	276.08 ✓	
700	Individuals & Cos	276.08 ✓	
	To transfer the following accounts		
70	Joseph Riley 30.00 Cash Sale	14	
70	State of Maryland 1.00 Entry of 1st of 1st	107	
700	Washington Bridge & Structural 115.00 New York Bridge Co	206	
100	Superior 6.41 W. Simpson	204	
100	" 6.41 W. Simpson	203	
210	Cash Sale 30 W. Sullivan	207	
210	M. Smith 95 Cash Sale	14	
700	A. Miggins 25 " "	14	
700	Washington Bridge & Structural 124.75 Repair W. Farnham	207	
700	Individuals & Cos	124	
700	Individuals & Cos	124	
	To transfer the following accounts		
1	Bates Accts Rec 124 Bates Accts Rec	14	
10	Ort. School 124 Citizens State Bank	10	
700	Individuals & Cos	124	
700	Individuals & Cos	124	
	To transfer the following accounts		
1	Madison & Co 1.75 Bates Accts Rec 124	14	
	Madison & Co 1.75	106	
700	General Expense	100.00 ✓	
700	Individuals & Cos	100.00 ✓	
	Transferring amount of Bates Accts Expense for month of September 1905 from Bates Accts Rec to General Expense		
1	Bates Accts Rec # 100.00	14	
7	Bates Extra Expense # 100.00		
180	Manufacturing	19.4	
174	General Expense (copy)	19	
	A. current error in distribution		
	may transfer 20.577		
170	Special Shop Order 18.00	14	
170	" " 16.13	18	

Orange 22 Sept 1905

174	General Expense	31.95 ✓	
700	Individuals & Cos	31.95 ✓	
	Amount of Cash Disbursements allowed Bates Accts Rec for prompt settlement of accounts during month of September 1905 as recorded in Cash Book # 31.95 inclusive		
700	Individuals & Cos	758.39 ✓	
174	General Expense	758.39 ✓	
	For amount of Cash Disbursements deducted in prompt settlement of Bates Payables during month of September 1905 as recorded in Cash Book # 758.39 inclusive		
700	Individuals & Cos	1405.66 ✓	
1	General Expense	1405.66 ✓	
	For amount of bills entered in Abstract of Sales during month of September 1905 as recorded on file # 1405.66 inclusive and to be credited as follows		
174	General Expense	1348.11 ✓	
100	Sales	1390.81 ✓	
180	Manufacturing	134.66 ✓	
700	Individuals & Cos	57.70 ✓	
700	Individuals & Cos	57.70 ✓	
	To transfer National Phone Co. P. M. Bell 57.70		
200	New York Bridge & Structural Iron Works 57.70		
1	National Phone Co. 57.70		
180	Manufacturing	68.0 X	
174	General Expense	68.0 ✓	
	To correct error in distribution of April books & statement having been distributed to L. O. R. instead of Special Shop Order # 163		
	Manufacturing Shop Order (163) # 6.30		

Orange 27 September 1905

✓ 169 Sales

Sales

To consolidate Spring motor &amp; Phone ap's for month of September 1905

✓ 170 Spring motor 208.28 Phone 4

✓ 180 Manufacturing

Manufacturing

To charge specific Ship Order account with amount of 700 sq ft 4 1/4" box 200 sq ft of 1 1/4" box and 50 lbs of 1 1/4" nails some having been used to make 500 small traps on per of S Order #146

✓ 180 Special Ship Order #146 \$16.35 Box Factory 16.35

✓ 190 Manufacturing

General Expense (Misc)

To correct error in distribution of Apr. Truck #17 amount charged to V.O. #146 distributed to S.C. Misc instead of special ship order

✓ 190 Special Ship Order #146 \$ 3.35

✓ 190 Sundries

Individuals

amount of Invoice vouchers for month of September 1905 as recorded on Register of Disbursements folios 101 to 105-bath inclusive chargeable to

✓ 191 General Expense

✓ 191 Machinery &amp; Tools

✓ 191 Real Estate &amp; Bldg

✓ 191 Furniture &amp; Fixtures

✓ 190 Manufacturing

✓ 190 Individuals

208.28 X  
X 15.51 9816.30 X  
X 16.30300 X  
1 300

1.16729300

2202.99 X  
4687.56 X  
1.59 X  
127.12 X  
120.96 X  
62.61 X

Orange 27 September 1905

✓ 180 Manufacturing

30

✓ 180 Manufacturing

Manufacturing

To consolidate Spring motor &amp; Phone ap's for month of September 1905

✓ 19 Phone

11.41.27 Spring motor 156

✓ 1 Sundries

30

✓ 180 Manufacturing

Manufacturing

Account of Material Transfers for month of September 1905 as recorded on Register of Disbursements folios 101 to 105 inclusive chargeable to

✓ 191 General Expense

✓ 191 Machinery &amp; Tools

✓ 191 Real Estate &amp; Building

✓ 190 Manufacturing

11.41.07 X  
X 11.41.07

130.777.86

791.688 X  
150 X  
72 X  
23.859 16 X

Orange N.J. October 1905

180	Manufacturing	220X	
180	Manufacturing	X	220
	To transfer amount charged on error to Spring Motor & on June pouches #286		
	as		
140	Spec. Shop Order 150	250	19
	as		
✓	✓ Sundries	31	
150	Manufacturing	✓ 41229/18	
	Amount of Material Invoices for month of October 1905 as recorded in Receipts of Disbursements folio 119 charged to		
174	General Expense	925.13 ✓	
150	Manufacturing	81879.71 ✓	
191	Machinery & Tools	8072 ✓	
✓	✓ Sundries	31	
✓ 600	Individuals & Co	✓ 188249/12	
	For amount of Disbursements included during month of October 1905 as recorded in Receipts of Disbursements folio 119 charged to		
174	General Expense	29553.28 ✓	
191	Machinery & Tools	787.26 ✓	
65	Real Estate & Buildings	1280 ✓	
180	Manufacturing	15781.107 ✓	
✓ 600	Individuals & Co	8701 ✓	
✓	✓ Sundries	31	
180	Manufacturing	112286X	
150	Manufacturing	X	112286
	To consolidate Spring Motor and Phone 4's for month of October 1905		
	as		
19	Phone 1526 1/2 Spring Motor	156	
✓ 600	Individuals & Co	65	
✓ 600	Individuals & Co	✓	65
	To transfer the following amounts or		
✓	✓ National Phone Co	65	John Courtney 50

Orange N.J. October 1905

174	General Expense	100.00 ✓	
200	Individuals & Co	✓	100.00
	Transferring amount of Bate's Bate Expense for month of October 1905 from Bate's Accts Re to General Ledger		
4	Bate's Accts Re	100.00	
7	Bate's Bate Expense	100.00	
	as		
174	General Expense	31	
200	Individuals & Co	757X ✓	757X
	For amount of Cost Overruns allowed Bate's Accts Receivables during month of October 1905 as recorded in Cost Book #7 folio 19 to be included in		
4	Bate's Accts Re	75.75	
	as		
200	Individuals & Co	898.70 ✓	
174	General Expense	✓	898.70
	Amount of Cost Overruns deducted in prompt settlement of Accts Payable for month of October 1905 as recorded in Cost Book #7 folio 19 to be included in		
✓ 600	Individuals & Co	18752.96 ✓	
✓	✓ Sundries		
	For amount of bills entered in Abstract of Sales during month of October 1905 as recorded on folios 602 to 607 inclusive and to be credited as follows		
174	General Expense	✓	207.86
200	Sales	✓	1197.80 ✓
180	Manufacturing	✓	18
	as		
274	Sales	2717.05X	
209	Sales	X	2717.05
	To consolidate Spring Motor & Phone 4's for month of October 1905		
	as		
48	Spring Motor 2717 To Phone	4	

Orange 29 October 1905

760	Individuals Co	31		10 62 1/2	
760	Individuals Co			✓	10 62 1/2
to transfer the following accounts					
	or				
4	Bate Accts Rec	10 64	Bate Accts Rec	✓	
17	The Auction Co	1 95	Surplus	3	
3	Surplus	8 67	W. F. Branger	14	

Orange 29 November 1905

160	Dividend	20			
201	Individuals Co			6018 00 1/2	✓ 6018 00
For a dividend of 15% per share on all the stock of the company entitled thereto payable November 20 1905					
15	Charles B. Bickel	246 75	15%	310 55	✓
13	Wm. Thomas Alderson	446 75	"	558 44	✓
16	Henry B. Washburn	246 00	"	312 50	✓
3	International Supply Co	1430 00	"	1787 50	
1	Thomas Alderson	2431 20	"	2789 00	✓
8	John B. Randolph	10 00	"	12 50	
8	Wm. B. Bickel	163 00	"	203 75	
105	Oliver J. Wells	5 00	"	6 25	
106	P. M. Morrison	5 00	"	6 25	
17	John B. Bickel	5 00	"	6 25	
Dividend # 25					

174	General Expenses	29		175 00 1/2	✓ 175 00
761	Individuals Co			✓	
Transferring amount of Bate Accts Expenses for month of November 1905 from Bate Accts Rec to General Ledger					
4	Bate Accts Rec	125 00			
4	Bate Accts Expenses	125 00			

174	General Expenses			50 00 1/2	✓ 50 00 1/2
761	Individuals Co			✓	
Amount of Cash Discounts allowed Bate Accts Rec during month of November 1905 for prompt payment of Invoices as recorded in Cash Book No 7 folio 17 to 24 inclusive					
4	Bate Accts Rec	53 00			

150	Manufacturing			1707 63 X	✓ 1707 63
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To consolidate Spring Motor & Thons  
exp for month of November 1905

19	Thons	1707 63	Spring Motor	156	
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Orange 24<sup>th</sup> November 1905

701	Individuals & Co.	106,162.4
174	General Expense	✓ 106,162.4
Amount of Cash Disbursements debited in front settlement of accounts payable during month of November 1905 as recorded in Cashbook 71 plus 47 to 75		
✓	Summaries	
180	Manufacturing	✓ 46,638.85
Amount of Material Transfers for month of November 1905 as recorded in Register of Disbursements folios 124 to 125 inclusive chargeable to		
174	General Expense	10749.884
180	Manufacturing	34610.974
✓	Summaries	
401	Individuals & Co.	✓ 177,130.41
Amount of Disbursements transferred during month of November 1905 as recorded in Register of Disbursements folios 124 to 125 inclusive chargeable to		
174	General Expense	30211.084
101	Machinery & Tools	206,160.4
180	Manufacturing	14477.344
401	Individuals & Co.	8224.4
180	Manufacturing	177,818
✓	Summaries	
To correct errors in distribution of October March 1908 amounts chargeable to Ship Orders 1291 - 1292 - 1293 - 1294 distributed to Special S.O., should be as follows		
180	Manufacturing	
174	General Expense	✓ 2270
✓		✓ 1,549.1
140	Ship Orders 127 3/4	
150	Miscellaneous 72.70	
	1291 - 1292 - 1293 -	
	1294 - 1295 - 1296 -	

Orange 24<sup>th</sup> November 1905

201	Individuals & Co.	749.4
201	Individuals & Co.	✓ 749.4
To transfer the following amounts		
4	Tower Mfg. Co. 749	Ratio Accts. Recd. 4
	Tower Mfg. Machinery Co. 749	
201	Individuals & Co.	19,200.484
✓	Summaries	
For amount of Sales during month of November 1905 as recorded in Abstract of Sales folio 617 to 619 inclusive and to be credited as follows		
174	General Expense	✓ 67.36
701	Sales	✓ 19,200.430
180	Manufacturing	✓ 282
✓		
701	Sales	28.02394
701	Sales	X 28.0239
To consolidate Spring Motor & Phone for month of November 1905		
41	Spring Motor 280 3/4	Phone 4





Orange 29 December 1905

## I Sources

Manufacturing  
Amount of Material Expenses for  
month of December 1905 as recorded in  
Register of Disbursements folios 119 to 131 and  
charged to

## General Expense

111,57.06

## Manufacturing

34,70.01

## Manufacturing

1,089.00

## Manufacturing

1,089.00

To accommodate Spring Motor 100.00  
for month of December 1905

Phos 100.00 Spring Motor No.

## Individuals &amp; Co

11,03.97

## General Expense

11,03.97

Amount of Cash Disbursements deducted in  
prompt settlement of accounts payable  
during month of December 1905 as recorded  
in Cash Book No. 7 folios 76 to 83 inclusive

## General Expense

79.19

## Individuals &amp; Co

79.19

Amount of Cash Disbursements allowed  
in prompt settlement of Bates Accts Rec  
during month of December 1905 as  
recorded in Cash Book No. 7 folios 76 to 83 and  
Bates Accounts Receivable 79.19

## General Expense

100.00

## Individuals &amp; Co

100.00

Transferring amount of Bates Extra  
Expense for month of December 1905  
from Bates Accts Rec to General Expense

## Bates Extra Co Expense

100.00

## Bates Accts Rec

100.00

Orange 29 January 1906

## Individuals &amp; Co

## Individuals &amp; Co

## To disburse the following items

## Bates Accts Rec

## General Expense

## General Expense

## General Expense

## General Expense

## General Expense

## General Expense

## General Expense

## General Expense

## General Expense

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## General Expense

## General Expense

## General Expense

## General Expense

## General Expense

## General Expense

## General Expense



Orange 27 of January 1906.

17	General Expense	4749 1/2	
201	Individuals Recs	4749 1/2	
	Amount of Cash Disbursements allowed in prompt settlement of Bates Accts Rec during month of January 1906 as recorded in Cash Book folios 88 to 91. Debit Bates Accts Rec 4749 1/2		4749 1/2
174	General Expense	17500 1/2	
201	Individuals Recs	17500 1/2	
	Transferring amount of Bates Accts Expense for month of January 1906 from Bates Accts Rec to General Ledger Bates Accts Rec 125 1/2 Bates Extra Expense 125 1/2		125 1/2
1	Supplies		
212	Manufacturing		
	To cancel Keweenaw Journal Entry covering errors in distribution of Cat Number # 438.		177 81
212	Manufacturing	2290 X	
174	General Expense	15491 1/2	
180	Miscellaneous	2290	
140	Species Slip Order		
	1889 S.E. Mine		
	1891 " " Mfg Co		
	1899 " " Mfg Co		
201	Individuals Recs		
174	General Expense	997 1/2	
	Amount of Cash Disbursements debited in prompt settlement of accounts Payables during month of January 1906 as recorded in Cash Book folios 84 to 91. Debit	997 1/2	

Orange 29 of January 1906.

1	Supplies		
212	Manufacturing		
	To correct errors in distribution of Cat Number # 438 amounts chargeable to Ship Orders 1889-1891-1893-1899 distributed to Special Ship Order		177 81
212	Manufacturing	2290 X	
174	General Expense	15491 1/2	
180	Miscellaneous	2290	
140	Species Slip Order		
	1892 Mine		
	1889 S.E. Mine		
	1891 " " Mfg Co		
	1899 " " Mfg Co		
212	Manufacturing		
212	Manufacturing	1600 X	
	To cancel Journal Entry Sp. Order # 1900 charging S.S.O. # 1664 with lumber and nails amounting to \$16 1/2		1600
140	Species Slip Order		
	# 1664 S.S.O. # 1664, 1900		
1	Supplies		
212	Manufacturing		
	Amount of Material Transferred vouchers during month of January 1906 as recorded in Register of Disbursements folios 140-145 vide chargeable as follows		141 53 1/2
174	General Expense	8188 1/2	
191	Machinery & Tools	703 1/2	
28	Bat Cattle Buildings	125 1/2	
212	Manufacturing	3365 1/2	
212	Manufacturing	1523 86 X	
212	Manufacturing		
	To consolidate Spring Motor & then the funds of Jan 1906		1523 86 X
19	Phone	1523 86	

Orange, J. January 1906

1	Summaries	31	
201	Individuals		4757.1797
	Amount of Disbursements recorded during month of January 1906 as recorded in Register of Disbursements follows		
	14 to 149 new and chargeable as follows		
174	General Exp. passed	5455.651	
191	Machinery & Tools	4049.804	
28	Rail & State Building	147.1891	
37	Furniture & Fixtures	403.954	
14	Automobile Account	3000.004	
17	Manufacturing	132187.701	
201	Individuals	53184	
31			
201	Individuals		156211891
1	Summaries		
	Amount of Bills entered in Abstract of Sales during month of January 1906 and to be credited as follows.		
174	General Exp. passed	1	5311
209	Sales	18607522	
214	Manufacturing	1979	
209	Sales	163578	
209	Sales	163578	
	2 candidates Spring Motor & Phone also for month of January 1906		
	11 Spring Motor 1635.78 Phone 4		
201	Individuals	254	
201	Individuals	1	20
	To transfer the following accounts		
17	National Phone Co. 25 Cypress Fall	2041	
201	Individuals	42324	
201	Individuals	42324	
	To transfer the above item		
1	Bates Accts Rec	42324	
104	Lord Advertising Agency	42324	

Orange, J. January 1906

201	Individuals	31	
201	Individuals		424
	To transfer the above item		424
1	Bates Accts Rec	424	
205	J. W. Cranstshaw	424	
201	Individuals		624
201	Individuals		62
	To transfer the following accounts		
1	Bates Accts Rec	624	
105	Quinnville Nashville R.R.	14	
204	J. W. Cranstshaw	60	
	La Moore	60	
	Argentine	60	

Orange N.J. February 1906.

[illegible]

Orange, N. J. February 1906.

[illegible]

Orange N.J. February 1906

703	<u>Bank Interest</u>	160.0000	
705	<u>Prepaid Bank Interest</u>	✓ 660.0000	
	For amount of Bank Interest due this day or before 17		
8	<u>Profits &amp; Loss</u>	✓ 40.391	
701	<u>Individuals &amp; Co's</u>	✓ 40.391	
	Spends off amount of Bank Expenses for		
	year after ending February 28th 1906		
	40.391 Bank Cash Paid 41		
	40.391 Bank Expense 3		
701	<u>Individuals &amp; Co's</u>	107.5694	
701	<u>General Expense</u>	✓ 107.5694	
	For amount of Cash Disbursements deducted		
	in prompt settlement of accounts Payable		
	during month of February 1906		
1	<u>Landries</u>		
701	<u>Manufacturing</u>	✓ 42.99384	
	For amount of material transferred for		
	month of February 1906 as recorded in		
	Register of Disbursements Feb. 15 and		
	charged to as follows		
701	<u>General Expense</u>	98.12094	
701	<u>Machinery &amp; Tools</u>	667.4	
701	<u>Real Estate &amp; Building</u>	36.824	
701	<u>Manufacturing</u>	30.140854	
✓	<u>Landries</u>		
701	<u>Individuals &amp; Co's</u>	✓ 170.05771	
	For amount of Transfer for month of		
	February 1906 as recorded in Register of		
	Disbursements Feb. 15 to 15 and		
	charged to		
701	<u>General Expense</u>	21.99941	
701	<u>Machinery &amp; Tools</u>	5270.504	
701	<u>Real Estate &amp; Building</u>	62.10894	
701	<u>Manufacturing</u>	126.420864	
701	<u>Individuals &amp; Co's</u>	17.754	

Orange N.J. February 1906

701	<u>Manufacturing</u>	1208.954	
701	<u>Manufacturing</u>	✓ 1208.954	
17	<u>Phone</u>	1208.954 Spring Motor 150	
701	<u>Sales</u>	1900.244	
701	<u>Sales</u>	✓ 1900.244	
17	<u>Phone</u>	1208.954 Spring Motor 150	
701	<u>Individuals &amp; Co's</u>	2056.46684	
✓	<u>Landries</u>		
	Amount of Sales for month of February		
	1906 as recorded in Abstract of Sales		
	Feb. 15 to 15 - both inclusive to be		
	credited as follows		
701	<u>General Expense</u>	✓ 29.50	
701	<u>Sales</u>	✓ 2056.89450	
701	<u>Manufacturing</u>	✓ 75.468	
701	<u>Individuals &amp; Co's</u>	2056.1	
8	<u>Profits &amp; Loss</u>	✓ 2056.1	
✓	<u>Landries</u>		
	3 write off the following accounts		
17	<u>Phone</u>	✓ 1208.954	
17	<u>Phone</u>	✓ 1208.954	

Orange, N. J. February 1906.

9/11	Manufacturing	28		
	Oral Estate <sup>for Buildings</sup>	9/8	1140.8	1141
	To correct distribution of January 1944 as follows; Special Shop Order No. 7144			
	(S.S.O. 12632)			
	28			
9/11	Manufacturing		914.85	914.85
	Manufacturing	9/11		
	To correct distribution of 9/11 transfer for December			
	as follows;			
9/10	Special Shop Order No. 7055			
	Projecting Telescope	9/11		
	(S.S.O. 1584) \$497			
	68 720			
	77 1220			
	80 1825			
	1603 366			
	10 5153			
	11 7490			
	19 229			
	22 3393			
	28			
9/11	Manufacturing		128.25	128.25
	General Expense & Profit	9/10		
	To correct distribution of Jan. 1944 as follows;			
9/10	Special Shop Order No. 1982			
	(S.S.O. 14011) \$100			
	1515 26			
	1593 262			
	1549 06			
	1566 99.00			
	1568 1680			
	1594 28			
	1589 1.41			
	1622 84			
	1623 22			
	1624 4.83			

Orange N.J. February 1906.

140	Manufacturing	General Expense (Ref 17)	145	1571.00	✓
		Manufacturing	714		✓ 15098
		Special Ship Order No. 1578			✓ 12
		Miscellaneous	128	180	
		(S 50 1576 - 1582 Ref 17)			
		1549	12	Mon	
141	Manufacturing	28			
		Surplies	✓	14751	✓
		To correct distribution of Jan. 1939 Oct. 1939, which charges were made in error to S 50 7339-91-92-99.			
		In correcting this distribution, corrections made were the entry was cancelled and revised in January.			
		Following new distribution that these charges should have been made against S 50 1579-91-92-99 entry is accordingly in order to transform as follows:			
142	Special Ship Order No. 1578	714			
	Manufacturing	714			2290
	General Expense	145			✓ 15491
		64			
	Miscellaneous	228	180		
	(S 50 1571 - 1580)				
	1573 22.22	1571 2000 400			
	1579 32.22	1573 2000 1200			
	1579 118.22	1573 32 2000 3000			
		28			
143	Manufacturing	General Expense (Ref 17)	145	46592	✓
		Manufacturing			✓ 46592
		Special Ship Order No. 1582			
		(S 50 1571 - 1580)			
		1573 22.22	1571 2000 400		
		1579 32.22	1573 2000 1200		
		1579 118.22	1573 32 2000 3000		
		28			
144	Manufacturing	General Expense (Ref 17)	145	46592	✓
		Manufacturing			✓ 46592
		Special Ship Order No. 1582			
		(S 50 1571 - 1580)			
		1573 22.22	1571 2000 400		
		1579 32.22	1573 2000 1200		
		1579 118.22	1573 32 2000 3000		
		28			









Orange, N.J. February 25<sup>th</sup>, 1906.

209 Sales	1532006.65
211 Manufacturing	4532006.65
2. transfer of sales of the following accounts for the fiscal year ending July 25 <sup>th</sup> 1906.	
14 Photographic	\$51,053.47
15 Auto Chambering Machines	51,693.53
67 Cases & dies	1,524.27
9 Wax	353.46
77 Miscellaneous	23,472.97
107 Saw allator	2,508.56
39 Projecting Piston caps	22,122.42
57 General Material Sales	3,304.32
70 Cabinet	259,842.31
	1532006.65

209 Sales	192546.32
8 Profit & Loss	192546.32
2. profits realized on the following accounts during the fiscal year ending July 25 <sup>th</sup> 1906.	
14 Photographic	\$122,108.02
9 Wax	58,020.00
15 Auto Chambering Machines	12,528.81
77 Miscellaneous	4941.65
39 Projecting Piston caps	912.44
57 Material Sales	706.06
67 Cases & dies	2414.53
70 Cabinet	3361.19
107 Saw allator	254.52
	192546.32

8 Profit & Loss	185754.84
Manufacturing Rights	4185754.84
2. revenue Manufacturing Rights to be a balance of 2.	
209 Miscellaneous Accounts	10.00
Manufacturing Rights	100
2. to consolidate the above accounts	

Orange, N.J. February 25<sup>th</sup> 1906

8 Profit & Loss	General	390744
211	Manufacturing Rights	4185754.84
Transfer off the following accounts		
	3. to be eliminated Monthly	3
	720	720

Orange, N. J. March 31, 1906

1	Individuals		
101	Individuals	127683.85	
	For amount of distributions received during month of March 1906 as recorded in Register of Distributions, folios 166 to 168, and charges as follows:		
102	General Expense	46.19	94
103	Machinery	1080.80	101
104	Real Estate	99.56	104
105	Insurance	18.77	105
106	Manufacturing	22159.52	106
107	Individuals	607.64	
1	Individuals		
101	Individuals	55052.12	
	For amount of salaries transferred during month of February 1906 as recorded in Register of Salaries, folios 161 and 162, and charges as follows:		
102	General Expense	108.17	102
103	Machinery	50	
104	Real Estate	44203.84	
105	Insurance		
106	Manufacturing	251.82	106
107	Individuals	267.39	
	To investigate Spring Motor in Phonograph for month of March 1906:		
108	Phonograph	258.82	108
109	Individuals		
110	Individuals	20802.86	
	For amount of bills entered in Sales Abstract during month of March 1906 and to be credited as follows:		
111	General Expense	1	111
112	Sales	42081.15	112
113	Sales		
114	Sales	2477.03	114
115	Sales		
	To investigate Spring Motor in Phonograph for month of March 1906:		
116	Spring Motor	2477.03	116
117	Phonograph		

Orange, N. J. March 31, 1906

118	General Expense		
119	Individuals	12500	119
	To transfer amount of Bates Extra Expense month of March 1906 from Bates Extra Expense to General Expense		
120	Bates Extra Expense	12500	120
121	General Expense		
122	Individuals	11013.41	122
123	General Expense	11013.41	123
	Amount of cash discounts received by us in prompt settlement of accounts payable month of February 1906, as recorded in Cash Book, folios 101 to 105:		
124	General Expense		
125	Individuals	4688	125
	Amount of cash discounts allowed us in prompt settlement of Bates Accounts Receivable month of March 1906, as recorded in Cash Book, folios 101 to 105:		
126	General Expense	7.33	126
127	Individuals		
128	General Expense	1043.1	128
129	Individuals	1043.1	129
	Amount of cash discount allowed us in prompt settlement of Individuals Accounts Receivable month of March 1906, as recorded in Cash Book, folios 101 to 105:		
130	Individuals		
131	Individuals	171.1	131
132	Individuals		
	To transfer the following amounts:		
133	Bates Extra Expense	171	133
134	Real Estate	101	134
135	Real Estate	101	135
136	Real Estate	101	136
137	Real Estate	101	137
138	Real Estate	101	138
139	Real Estate	101	139
140	Individuals	1786.1	140
141	Individuals	1786.1	141
	To transfer the following accounts:		
142	A. A. M. M. Co.	1786	142
143	Bates Extra Expense	1786	143

Orange, N.J. March 25<sup>th</sup> 1906

101	Manufacture & Co	11.36	✓	11.36
101	Manufacture & Co			
To transfer the following amounts:-				
	to			
1	Cash Acct. B.C.	11.36	Cash Acct. B.C.	11.36
3	Expenses	9.25	Manufacturing	101
101	Memo. - Summer School 27	1.75	Manufacturing	101
3	Expenses	1.75	Manufacturing	101

Orange, N.J. April 25<sup>th</sup> 1906

1	Manufacture	208	✓	4297.15
To amount of monies received during month of April 1906 as recorded in the Register of disbursements filed May 27 <sup>th</sup> 1906 and to be charged as follows:-				
175	General Expense		3026.29	
191	Manufacturing		45.25	
175	General Expense		46.25	
191	Manufacturing		196.27	
208	Manufacturing		52.76	
208	Manufacturing			
1	Manufacture	211	✓	4220.63
To amount of material transfers received during month of April 1906 as recorded in the Register of disbursements filed May 27 <sup>th</sup> 1906 and to be charged as follows:-				
175	General Expense		2115.00	
191	Manufacturing		10.00	
175	General Expense		46.54	
191	Manufacturing		110.03	
211	Manufacturing			
211	Manufacturing		385.26	
211	Manufacturing			
To transfer to Spring Notes & Charge for month of April 1906				
211	Spring Notes	300.00	Spring Notes	180
211	Spring Notes			
208	Manufacture		196.92	
To amount of monies received in Abstract of Sales for month of April 1906 and to be charged as follows:-				
175	General Expense		9.56	
209	Sales		1197.22	
209	Sales			
209	Sales		162.79	
209	Sales			
To transfer to Spring Notes & Charge for month of April 1906				
211	Spring Notes	362.79	Spring Notes	4

Orange N. J. April 30, 1906.

146 General Expense	Individuals Exp	70 <sup>v</sup>	4210.54	✓	4210.54
Amount of bank disbursements, charges misstatement of accounts during April 1906, reversed, in bank book & ledger (log & 116-Individuals)					
146 <sup>1/2</sup> P. S. Williams	Individuals Exp	16	✓		
147 Individuals Exp	General Expense	17 <sup>5</sup>	1542.20	✓	1542.20
Amount of bank disbursements, charges misstatement of accounts during April 1906 as reverse in bank book & ledger (log & 116-Individuals)					
147 <sup>1/2</sup> General Expense	Individuals Exp	70 <sup>v</sup>	467.84	✓	467.84
Transfer 1/2 of P. S. Williams bank to Transit, transfer with P. S. Williams bank, in bank purchase of securities, in statement the day					
147 <sup>1/2</sup> P. S. Williams	Individuals Exp	16	✓		
147 <sup>1/2</sup> General Expense	Individuals Exp	70 <sup>v</sup>	1000.00	✓	1000.00
Transfer for amount of P. S. Williams bank for month of April 1906 from bank book to P. S. Williams ledger					
100 <sup>1/2</sup> P. S. Williams	Individuals Exp	16	✓		
100 <sup>1/2</sup> P. S. Williams	Individuals Exp	7	✓		
147 <sup>1/2</sup> Individuals Exp	Individuals Exp	70 <sup>v</sup>	77.25	✓	77.25
Transfer for the following 1/2:					
✓ 1 Orange distributed	Expenses	110	✓		
✓ 100 <sup>1/2</sup> Publishing Expense	Individuals Exp	70 <sup>v</sup>	✓		
100 <sup>1/2</sup> Individuals Exp	Individuals Exp	70 <sup>v</sup>	17.51	✓	17.51
Transfer for the following 1/2:					
✓ 1 P. S. Williams	Individuals Exp	16	✓		
101 P. S. Williams	Individuals Exp	16	✓		

Orange N. J. April 30, 1906.

146 Individuals Exp	Individuals Exp	70 <sup>v</sup>	193.50	✓	193.50
Transfer for the above amount, posted to P. S. Williams bank					
✓ 16 P. S. Williams	Individuals Exp	16	✓		

Orange, N.J. May 31, 1906

✓ <u>Indebted</u>	Individuals & Cos	42,990.32
707	For amount of disbursements rendered during the month of May 1906 as recorded in Register of Disbursements folios 47, 48, 49, and chargeable as follows:	
708	General Expense	39,207.34
709	Advertising Costs	997.51
710	Post Office Postings	10,441.15
711	Telephone Expenses	2,750.00
712	Manufacturing	199,157.64
713	Individuals & Cos	10,111.14
✓ <u>Indebted</u>	-31-	
714	Manufacturing	4,649.50
715	For amount of material supplies rendered during the month of May 1906 as recorded in the Register of Disbursements, folios 48, and chargeable as follows:	
716	General Expense	72,617.64
717	Advertising Costs	36,394
718	Post Office Postings	574.50
719	Manufacturing	441,522.84
720	Manufacturing	-31-
721	Manufacturing	30,339.28
722	Manufacturing	30,339.28
723	To credit of Spring Meter and Stereograph accounts, month of May 1906:	
724	Stereographs	3,333.33
725	Spring Meter	150
726	Individuals & Cos	-31-
727	Individuals & Cos	18,528.04
✓ <u>Indebted</u>	Liabilities	
728	For amount of bills entered in Sales Abstract for month of May 1906 and to be credited as follows:	
729	General Expense	4,048.80
730	Sales	418,831.70
731	Manufacturing	5,551.00
732	Individuals & Cos	-31-
733	General Expense	15,278.44
734	General Expense	1,378.24
735	Amount of cash received, rendered in prompt payment of accounts payable for month of May 1906 as recorded in Cash Book folios 127, 128, 129, and 130:	

Orange, N.J. May 31, 1906

736	General Expense	81,657
737	Individuals & Cos	8,790
738	Amount of cash received, rendered in prompt payment of Sales Accounts Payable month of May 1906, as recorded in Cash Book folios 127, 128, 129, and 130:	
739	Individuals & Cos	81,657
740	Individuals & Cos	8,790
741	Individuals & Cos	81,657
742	Individuals & Cos	8,790
743	Individuals & Cos	81,657
744	Individuals & Cos	8,790
745	Individuals & Cos	81,657
746	Individuals & Cos	8,790
747	Individuals & Cos	81,657
748	Individuals & Cos	8,790
749	Individuals & Cos	81,657
750	Individuals & Cos	8,790
751	Individuals & Cos	81,657
752	Individuals & Cos	8,790
753	Individuals & Cos	81,657
754	Individuals & Cos	8,790
755	Individuals & Cos	81,657
756	Individuals & Cos	8,790
757	Individuals & Cos	81,657
758	Individuals & Cos	8,790
759	Individuals & Cos	81,657
760	Individuals & Cos	8,790
761	Individuals & Cos	81,657
762	Individuals & Cos	8,790
763	Individuals & Cos	81,657
764	Individuals & Cos	8,790
765	Individuals & Cos	81,657
766	Individuals & Cos	8,790
767	Individuals & Cos	81,657
768	Individuals & Cos	8,790
769	Individuals & Cos	81,657
770	Individuals & Cos	8,790
771	Individuals & Cos	81,657
772	Individuals & Cos	8,790
773	Individuals & Cos	81,657
774	Individuals & Cos	8,790
775	Individuals & Cos	81,657
776	Individuals & Cos	8,790
777	Individuals & Cos	81,657
778	Individuals & Cos	8,790
779	Individuals & Cos	81,657
780	Individuals & Cos	8,790
781	Individuals & Cos	81,657
782	Individuals & Cos	8,790
783	Individuals & Cos	81,657
784	Individuals & Cos	8,790
785	Individuals & Cos	81,657
786	Individuals & Cos	8,790
787	Individuals & Cos	81,657
788	Individuals & Cos	8,790
789	Individuals & Cos	81,657
790	Individuals & Cos	8,790
791	Individuals & Cos	81,657
792	Individuals & Cos	8,790
793	Individuals & Cos	81,657
794	Individuals & Cos	8,790
795	Individuals & Cos	81,657
796	Individuals & Cos	8,790
797	Individuals & Cos	81,657
798	Individuals & Cos	8,790
799	Individuals & Cos	81,657
800	Individuals & Cos	8,790

Orange N. H. May 21<sup>st</sup> 1906Dividends  
707

Individuals &amp; Co's

6018001

1 601800

To a dividend of \$25 per share on the stock of  
the company outside thirty payable May 21<sup>st</sup> 1906  
<Dividends 27>

601			
✓ Chas. Appleton	280000	Share @ 125	35000 20
✓ Mrs. Mrs. Abram	40000		5000 13
✓ Mary A. Acknowledges	25000		3125 106
✓ International Telephone Co.	150000		18750 3
✓ Mrs. A. Collins	2200 210		2750 1
✓ Mrs. J. Randolph	10000		1250 3
✓ Mrs. E. Schumacher	160000		20000 8
✓ Oliver Wells	5000		625 105
✓ L. H. Morrison	5000		625 106
✓ John H. Schumacher	5000		625 17

Orange N. H. June 2<sup>nd</sup> 1906

✓ Ladies

Individuals &amp; Co's

707

136707013

The amount of bills rendered during month of June 1906 as  
received in Office of Individuals & Co's 150-196 Am. and  
charged as follows:

118 General Expense	37835 481
78 Real Estate Buildings	14592 04
191 Machinery Tools	30909 10
37 Insurance Expenses	3058 34
194 Automobiles	100000
703 Manufacturing	180360 79
707 Individuals & Co's	60500

✓ Dividends

Manufacturing

713

15580501

Amount of bills rendered during month of  
June 1906 as received in Office of Individuals & Co's 150-196  
and charged as follows:

118 General Expense	21663 04
191 Machinery Tools	145000
78 Real Estate Buildings	60500
37 Insurance Expenses	777
703 Manufacturing	33925 78
713 Manufacturing	53175 62
707 Individuals & Co's	222706

To credit of Spring Water & Pine 100 month of June 1906  
700 Graphical 50788 Spring Water 100

707 Individuals &amp; Co's

Ladies

✓

184661951

The amount of bills entered in Abstract of Sales for month  
of June 1906 and to be ordered as follows:

118 General Expense	140	✓	41
709 Sales	140	✓	1530936
713 Manufacturing	215	✓	32218
118 General Expense	82120		
707 Individuals & Co's	1	✓	8072

Amount of cash disbursements in prompt payment of  
bills rendered for month of June 1906 as received in cash book  
of first six weeks

50788 Sales Cash Exp. 4

Orange N.Y. Jan 24/96

147	Individuals Crd	General Expense	170	1290.15	✓	1290.15
Amount of cash discount deducted in prompt payment of accounts for month of June 96 as received in Cash Book 7/ June 16-1833 Due.						
148	General Expense	Individuals Crd	170	22.33	✓	22.33
To credit 1/4 of R.D. Williams share by Toronto branches with 2% cash discount on June purchases deducted in remittance received this day.						
149	Individuals Crd	R.D. Williams share by	16			
To transfer the following 1/4:						
150	Individuals Crd	Individuals Crd	170	12.00	✓	12.00
To transfer amount of Bates Extra Expense month of June 96 from Bates accounts & General Ledger						
151	Bates Extra Exp.	Bates Extra Exp.	120		✓	
152	Bates Extra Exp.	Bates Extra Exp.	120		✓	
153	General Expense	Individuals Crd	170	100.00	✓	100.00
To transfer amount of Bates Extra Expense month of June 96 from Bates accounts & General Ledger						
154	General Expense	Individuals Crd	170			
To transfer amount of Bates Extra Expense month of June 96 from Bates accounts & General Ledger						
155	General Expense	Individuals Crd	170			
To transfer amount of Bates Extra Expense month of June 96 from Bates accounts & General Ledger						

Orange N.Y. July 1906

156	General Expense	Individuals Crd	13			
To credit acct of R.D. Williams & Sons Co Toronto, Canada with 2% cash discount on June purchases deducted in remittance received this day.						
157	Individuals Crd	R.D. Williams & Sons Co	140			
158	Profit & Loss	Real Estate Building	100.00			
To write off amount charged to Building 1/4 same having been destroyed						
159	Profit & Loss	Real Estate Building	100.00			
To write off amount charged to Building 1/4 same having been destroyed						
160	General Expense	Individuals Crd	10000			
Transferring amount of Bates Extra Expense for month of July 1906 from Bates Extra Receivable to General Ledger						
161	Bates Extra Exp.	Bates Extra Exp.	100.00			
162	Bates Extra Exp.	Bates Extra Exp.	100.00			
163	Individuals Crd	Individuals Crd	660			
To transfer balance due Natl Phone Co. Chicago to Natl Phone Co. Orange						
164	Natl Phone Co.	Natl Phone Co.	660			

Orange, N.J. July 1906

707	Individuals to be	100	✓
707	Individuals to be	✓	100
	To transfer following accounts		
	On		
✓	Auto Accts Rec 100		
101	Chas H. Shook Co 100	Chas H. Shook Co 111	
707	Individuals to be	76.55	✓
707	Individuals to be	✓	76.55
	To transfer the following accounts		
	On		
101	C. H. Hodge 21.55	Nell Rhoads Co 7	
110	Scotchman Co 200	Chas H. Shook Co 200	
707	Individuals to be	72.05	✓
707	Individuals to be	✓	72.05
	To transfer the following accounts		
	On		
✓	Auto Accts Rec 72.05	Auto Accts Rec 7	
51	Auto & Garage 2.50	Auto & Garage 50	
101	J. Ruggie & Co 2.15	J. Ruggie & Co 104	
100	Auto Repair 9.50	Auto Repair 51	
51	Auto Repair 17.10	Auto Repair 53	
7	Safford & Son 1.50	Safford & Son 104	
101	Auto Repair 1.75	Auto Repair 50	
50	Auto Repair 7.50	Auto Repair 103	
101	Auto Repair 1.75	Auto Repair 50	
707	Individuals to be	200.44	✓
707	Individuals to be	✓	200.44
	To amount of bills entered in Sales Abstract during month of July 1906 and to be credited as follows:-		
101	General Expense	1	81.14
101	Auto	170.55	2.63
101	Manufacturing	✓	1.56

Orange, N.J. July 1906

1	Individuals to be	1739.77	✓
707	Individuals to be	✓	1739.77
	For amount of bills entered during July 1906 as recorded in Register of Disbursements folios 198 & 207 and chargeable as follows:-		
101	General Expense	3237.17	
98	Real Estate & Building	1501.56	
101	Machinery & Tools	750.50	
31	Manufacturing & Interest	289.55	
101	Automobile & Car	90.00	
101	Manufacturing & Car	183.15	
707	Individuals to be	509.31	✓
707	Individuals to be	✓	509.31
	General Expense	188.34	
707	Individuals to be	✓	188.34
	Amount of cash discount allowed for prompt payment of Auto Accts Rec for month of July 1906 as per Cash Book 1/4 folios 136 to 142 viz:-		
✓	Auto Accounts Rec 28.20		
707	Individuals to be	1099.21	✓
707	Individuals to be	✓	1099.21
	Amount of cash discount deducted for prompt payment of accounts for month of July 1906 as per Cash Book 1/4 folios 136 to 142 viz:-		
✓	Individuals to be	1549.50	✓
707	Individuals to be	✓	1549.50
	Amount of Material Transfers recorded during month of July 1906 as recorded in Register of Disbursements folios 207 and chargeable as follows:-		
101	General Expense	92.01	
101	Machinery & Tools	31.70	
101	Manufacturing	17.10	



Orange, N.J. July 1906

113 Manufacturing

113 Manufacturing  
To consolidate Spring Motor and  
Photograph accounts for month  
of July 1906.

110 Photograph 1866.15 Spring Motor 150

1866.15 X

X 1866.15

Orange, N.J. August 31, 1906

✓ General

113

Individuals' Cos

✓ 1246.38.16

In amount of bills rendered during month of August 1906 as  
recorded in Register of Disbursements, plus exp. & 25¢ per line and  
charges as follows:

113 General Expense

346.52.49.1

111 Machinery Tools

99.19.54.1

113 Real Estate Buildings

591.06.8.1

113 Furniture Fixtures

234.85.2.1

113 Automobiles

220.60.0.1

113 Manufacturing

19073.157.1

113 Individuals' Cos.

605.16.1

✓ General

113

Manufacturing

✓ 62730.03

In amount of Material Disbursements rendered during month  
of August 1906 as recorded in Register of Disbursements,  
plus exp. and charges as follows:

113 General Expense

12330.45.1

111 Machinery Tools

482.3.1

113 Real Estate Buildings

12020.1

113 Furniture Fixtures

553.8.1

113 Manufacturing

5017737.1

113 Manufacturing

24896.9.1

113 Manufacturing

X 24896.9

To consolidate Spring Motor and Photo. for month of August 1906  
to Sept. 1906

110 Photograph

1866.15

Spring Motor 150

113 General Expense

1250.0.1

113

Individuals' Cos

✓ 1250.0

To transfer Baker Extra Expense to General Expense

113

Baker Extra Expense

113

Baker Extra Expense

113

Baker Extra Expense

113 General Expense

607.5.1

113

Individuals' Cos

✓ 607.5

In amount of cash disbursements allowed on prompt settlement  
of Baker Extra Exp. month of August 1906 as recorded  
in Baker Extra Exp. for the month.

113

Baker Extra Exp.

602.2

Orange N.J. August 27, 1906

1475	Individuals Crs	1283.65 ✓	
1475	General Expenses	✓	1283.65
	For amount of each dividend deducted in prompt payment of this month of August 1906 as recorded in cash book July 1906 154.15 ✓		
1475	General Expenses	16	51.67 ✓
1475	Individuals Crs	✓	51.67
	To credit 1/2 of R. Williams' loan by Smith-Gardner with 2 1/2% each discount on July purchases deducted in remittance received this day		
16	R. Williams' loan by Smith-Gardner	51.67	
1475	Individuals Crs	2106.27.78 ✓	
	Dividends		
	For amount of bills entered in Abstract of Sales for month of August 1906, July 5 to 15 and to be credited as follows		
1475	General Expenses	✓	47.15
1475	Individuals Crs	✓	1240.66.93
1475	General Expenses	2	
1475	General Expenses	66.000 ✓	
1475	General Expenses	✓	66.000
	For amount of Bond Interest due this day on coupon #18		
1475	General Expenses	20	
1475	Individuals Crs	601.800 ✓	
	Dividends	✓	601.800
	For a dividend of 1/2% purchase on all the stock of this company entitled thereto, payable August 26, 1906		
	by (Dividend 1/2%)		
1475	John Nicholson	242.44 + shares @ 125°	30,250
1475	13 Mrs. Wm. A. Edison	466.750	58,344
1475	106 Mary A. Auchincloss	750.000	93,750
1475	3 International Telephone Co.	11430.000	1,428,750
1475	1 Mrs. A. Edison	220,121.0	27,515.125
1475	3 John F. Randolph	10,000	1,250
1475	8 Mrs. C. Edison	163.000	20,375
1475	100 Oliver J. Mills	5,000	625
1475	106 S. C. Thompson	5,000	625
1475	17 John R. Schumacher	5,000	625

Orange N.J. August 28, 1906

1475	Individuals Crs	960.0 ✓	
1475	Individuals Crs	✓	960.0
	To transfer for the following accounts:		
5	Edison Portland Cement Co.	Edison Cement Works	15
1475	Individuals Crs		125 ✓
1475	Individuals Crs	✓	125
	To transfer for above amount from National to North		
	bills; same being cash received August 1 by cash book		
✓	National Phonograph	125	15.00
1475	Individuals Crs	60.0 ✓	
1475	Individuals Crs	✓	60.0
	To transfer for the following amount from National to North bills:		
✓	National Phonograph	60	7.50
1475	Individuals Crs	16.50 ✓	
1475	Individuals Crs	✓	16.50
4	Barber Acute Row	16.50	2.06
51	High Valley R. Co.	45	5.62
103	Adrian L. H. H. Co.	125	15.62
1475	Individuals Crs	24.50 ✓	
1475	Individuals Crs	✓	24.50
	To transfer for the following accounts:		
4	Barber Acute Row	16.50	2.06
103	Adrian L. H. H. Co.	125	15.62

Orange, N.J. September 1906

775 Individuals & Co's	20.00	✓	20.00
Received this day note from Valentine Samp's Co. at one month payable at the Merchants Natl Bank, Merchants B.			
✓ 50 Bates Accts Rec. 20.00	Bates Accts Rec. 20.00	✓	
✓ 50 Bates Accts Rec. 20.00	Valentine Samp's 1	✓	
734 General Expense	40.53	✓	40.53
Is credit account of R. S. Williams & Sons Co. Toronto, Canada, with 2% cash discount on August purchases, deducted in remittance received this day			
R. S. Williams & Sons Co.	40.53	16	
734 General Expense	53.04	✓	53.04
Amount of cash discount allowed for prompt payment of Bates Accts Rec. for month of Sept 1906 as recorded in Cash Book 775 July 22 to 1906 41			
735 Individuals & Co's	820.60	✓	820.60
Amount of cash discount deducted in prompt payment of bills during Sept 1906 as recorded in Cash Book 775 July 22 to 1906 153			
735 General Expense	10.00	✓	10.00
Amount of Disbursements paid during month of September 1906 as recorded in Register of Disbursements folios 221 to 229 Inc. and chargeable to:-			
735 General Expense	45.09	✓	45.09
19 Machinery & Tools	744.52	✓	744.52
735 Real Estate Buildings	869.00	✓	869.00
735 Furniture Fixtures	129.65	✓	129.65
735 Manufacturing	18190.10	✓	18190.10
735 Individuals & Co's	612.01	✓	612.01

Orange, N.J. September 1906

735 Individuals	20.00	✓	20.00
Amount of Material Transfers for month of September 1906 as recorded in Register of Disbursements folios 221 to 229 Inc. and chargeable to:-			
735 General Expense	115.37	✓	115.37
19 Machinery & Tools	673.71	✓	673.71
735 Real Estate Buildings	21.54	✓	21.54
735 Furniture Fixtures	15.21	✓	15.21
735 Manufacturing	42109.54	✓	42109.54
735 Manufacturing	2100.36	✓	2100.36
To consolidate Spring Motor Thru this for month of September 1906			
70 Thru	2130.36	✓	2130.36
70 Spring Motor	118	✓	118
735 Individuals & Co's	233.97	✓	233.97
For amount of Sales during month of September 1906 as recorded in Sales Abstract folios 71 to 75 Inc. and to be credited as follows:-			
735 General Expense	115.37	✓	115.37
735 Sales	233.97	✓	233.97
735 Manufacturing	155.79	✓	155.79
735 General Expense	10.00	✓	10.00
To transfer amount of Bates Accts Rec. for month of September 1906 from Bates Accts Rec. to General Ledger			
735 Bates Accts Rec.	100.00	✓	100.00
735 Bates Accts Rec.	100.00	✓	100.00
735 Individuals & Co's	189.57	✓	189.57
To transfer the following amounts:-			
735 S. Carson	11.75	✓	11.75
735 S. Carson	11.75	✓	11.75
735 S. Carson	11.75	✓	11.75

Orange, N.J. September 1906

1. Individuals & Cos	725	3000.00	✓	3000.00
To transfer the above amount to Samuel Howell & Co. July 24 Cash Book is erroneously credited to S. Prof. J. S. Morgan & Co.				
4. Sales Accts. Rec. 300.00	4			
100.00 S. Prof. J. S. Morgan	1			
30.00 Samuel Howell & Co.				
113 Manufacturing	728	3000.00	✓	3000.00
To correct distribution of Voucher #4 August charged in error to Sales & Co.				
160 Miscellaneous Orders & Cos				

Orange, N.J. October 1906

1. Individuals & Cos	725	2762.15	✓	2762.15
To amount of bills rendered during month of October 1906 as recorded in Register of Disbursements folio 230-235 and to be charged as follows;				
132 General Expense		350.55	190	
147 Machinery & Tools		193.85	190	
138 Coal & Coke & Buildings		79.25	190	
148 Furniture & Fixtures		44.50	190	
113 Manufacturing		2067.56	190	
74 Sales		47.65	190	
115 Individuals & Cos		80.81	190	
✓ 115 Individuals & Cos	725	✓ 7291.24		
To amount of Material drawn for vouchers during month of October 1906 as recorded in Register of Disbursements, folio 235, and to be charged as follows;				
132 General Expense		140.34	190	
147 Machinery & Tools		135.57	190	
138 Coal & Coke & Buildings		16.14	190	
148 Furniture & Fixtures		2.41	190	
113 Manufacturing		575.95	190	
113 Manufacturing	723	120.55	190	
To consolidate Spring Meter & Therm. Co. 180.55				
70 Photograph	180.55			
115 Individuals & Cos	725	2557.57	✓	2557.57
To amount of Sales for month of October 1906 as recorded in Sales Abstract folio 55.95 and to be credited as follows;				
General Expense	725	✓ 40.65		
Sales	725	✓ 2457.92		
Manufacturing	723	✓ 8.46		

Orange, N.J. October 1906

31 General Expense

Individuals &amp; Co's

For amount of bank discounts allowed. Cakes Accts Recd for prompt payment of accounts during month of October 1906 as recorded in Cash Book 7 folios 16 to 17, inclusive. Date Accts Recd. 6/28 4

6178.4

6178

31 Individuals &amp; Co's

General Expense

Amount of bank discounts deducted during month of October 1906 for prompt settling of accounts payable as recorded in Cash Book 7 folios 16 to 17, inclusive.

1320.55

1320.55

31 General Expense

Individuals &amp; Co's

To credit the acct of R. S. Williams Bros Co, Ltd. Toronto, Canada, with 2% cash discount on September purchases deducted in remittance received this day.

553.21

553.21

R. S. Williams Bros Co Ltd 53.21 16

31 General Expense

Individuals &amp; Co's

Transferring amount of Date A/cal Expense for month of October 1906 from Date Accts Recd to General Ledger

10000.00

10,000

Date Accts Recd 10000.00 4

Date A/cal Expense 10000.00 2

31 Individuals &amp; Co's

Individuals &amp; Co's

To transfer the following accounts:-

National Thrift Co.

A. Auger

300

300

31 Individuals &amp; Co's

Individuals &amp; Co's

To suppose the following items:-

4 Date Accts Recd

Date Accts Recd

3 Expense

Bank Printing Co

47.1

47

Orange, N.J. October 1906

31 Individuals &amp; Co's

Individuals &amp; Co's

To transfer the following accounts:-

National Thrift Co.

Date Accts Recd 829.4

National Thrift Co. 829.4

829.4

829

31 Individuals &amp; Co's

Individuals &amp; Co's

To transfer the following amount as same was posted in error to N. of Potter Lumbering Machine Co under date of February 3rd. Cash 14.25

14.25

14.25

31 Date Accts Recd

Date Accts Recd

4 Potter Lumbering Machine

Metall National Bank

14.25

1

Orange, N. J. November, 1906.

225 Individuals & Cos.	30	✓	958 ✓	✓	958
Individuals & Cos.	225				
W. To transfer the following accounts	14				
101 W. Alderson & Co. 988 Bates Dept. Account	3				
50 Berlin Mills Co.	37				
103 Blackham Bros.	23				
101 Ocean State Wrecks Co.	17				
102 F. E. Douglas & Son	11				
105 P. & F. Corbin	12				
102 The First Mfg. Co.	27				
102 Fair Field & Highfly Co.	15				
101 John St. Hughes & Co.	29				
J. Hughes	05				
3	05				
51 Charles T. Hage	25				
101 E. W. Kiersey & Co.	09				
3 J. Hughes	01				
101 The M <sup>rs</sup> Ball Co.	10				
103 Samuel Schütz	25				
103 B. F. Oliver & Co.	13				
50 Southland Packing Co.	09				
101 Treadham Bros.	27				
103 William Stütz Co.	07				
105 Roger Hunter Williams	15				
8 Del. Sav. & Loan Bk. Co.	40				
50 J. W. Sprague	75				
H. Hager & Black	10				
50 Barrett Mfg. Co.	50				
50 Charles C. Horne	105				
01 J. Hughes	103				
30	30				
Individuals	30				
Individuals & Cos.	225				
For amount of bills rendered during November, 1906 as recorded in Bk. of Cash, folios 240 to 249 inc. and to be charged to	1255				
222 General Expense	1125				
112 Machinery & Tools	105				
222 Real Estate & Buildings	105				
222 Insurance & Expenses	105				
112 Automobiles	105				
210 Manufacturing	105				
222 Sales	105				
225 Individuals & Cos.	105				

Orange, N. J. November, 1906.

Individuals	30				
Manufacturing	210				
For amount of Material Transfers rendered during November, 1906 as recorded in Register of Disbursement folio 249 and to be charged to	1255				
222 General Expense	1125				
112 Machinery & Tools	105				
222 Real Estate & Buildings	105				
222 Insurance & Expenses	105				
210 Manufacturing	105				
222 Sales	105				
225 Individuals & Cos.	105				
Individuals	30				
For amount of Sales during month of November as recorded in Abstract of Sales, folios 97 to 105 inclusive and to be credited as follows	1255				
General Expense	222				
Sales	242				
Manufacturing	210				
30	30				
222 General Expense	1				
Individuals & Cos.	225				
Transferring amount of Sales Sales Expense for month of November, 1906 from Sales Account payable to General Ledger	1255				
Sales Account payable 175	11				
Sales Sales Expense 175	11				
30	30				
225 Individuals & Cos.	1610				
General Expense	222				
Amount of cash discounts deducted in settlement of Accounts Payable during month of November, 1906 as recorded in Cash Book, folios 170 to 179 inc.	1610				
30	30				
222 General Expense	97				
Individuals & Cos.	225				
Amount of cash discounts received Sales Accounts Receivable for prompt payments during month of November, 1906 as recorded in Cash Book, folios 172 to 179 inclusive	97				
Sales Accounts Receivable 97	11				

Orange, N.J. November, 1906.

220	Individuals & Cos.	225	250 ✓	250
	Individuals & Cos.	225	✓	250
	To transfer the following accounts:			
1	Ed. St. Express Co.	250	Ed. St. Express Co.	901
	30			
222	General Expense	225	257.50 ✓	257.50
	Individuals & Cos.	225	✓	257.50
	To credit account of P. Kelly with 2% cash discount on our bill Nov. 12-06. amount \$12.57 1/2			
	P. Kelly	257.50		
	30			
222	General Expense	225	26.45 ✓	26.45
	Individuals & Cos.	225	✓	26.45
	To credit account of C. H. Thorne & Co. with 2% cash discount on our bill dated Nov. 12-06. 9.27 1/2 and \$22.45			
	C. H. Thorne & Co.	26.45		
	30			
222	General Expense	225	58.50 ✓	58.50
	Individuals & Cos.	225	✓	58.50
	To credit the account of R. S. Williams & Sons Co. Ltd., Toronto, Can. with 2% cash discount on October purchases, deducted in remittances received this day.			
	R. S. Williams & Sons Co. Ltd.	58.50		
	30			
225	Individuals & Cos.	225	125 ✓	125
	Individuals & Cos.	225	✓	125
	To cancel the item of E. P. Jackson 1 1/2% appearing in Journal Entry, September 5. 1/2			
709	E. P. Jackson	125	National Phone Co.	7
	30			
210	Manufacturing	210	102.168 X	102.168
	Manufacturing	210	X	102.168
	To consolidate Spring Meter and Chronograph accounts for month of November, 1906.			
70	Chronograph	102.168	Spring Meter	199

Orange, N.J. November, 1906.

165	Dividends	22		
	Individuals & Cos.	225	601,800 ✓	601,800
	To a dividend of 1 1/2% per share on all the stock of the company entitled thereto payable November, 22 <sup>nd</sup> 1906.			
	Dividend # 29			
	Chas. Batchelor.	348,400 shares @ 1.25	312.50	75
	Mrs. Thomas A. Edson.	142,750	512.50	13
	Henry B. Archibald.	250,000	512.50	106
	International Telegraphs Co.	143,000	175.00	9
	Thomas A. Edson.	220,120	275.01	1
	John F. Handolph.	10,000	12.50	3
	Wm. C. Gilman.	112,000	202.50	8
	Oliver J. Wells.	5,000	6.25	15
	E. H. Morrison.	5,000	6.25	106
	John H. Schenckman.	5,000	6.25	14

Orange, N.J. December 1906

14	Individuals & Co.	31	Individuals & Co.	1900.4	1900.
	To transfer to following accounts				
13	Erie R.R. Co.	19	Erie R.R. Co. Chemical	104.1	
16	Individuals & Co.	31	Individuals & Co.	5784	578.
	To transfer to above amount which was posted to the account of R.R. Williams & Son				
4	Bates Accts Rec.	57	Bates Accts Rec.	4.1	
55	R.R. Williams & Son	57	Edwin R. Williams	105.	
16	Individuals & Co.	31	Individuals & Co.	97.4	9.
	To transfer to following accounts				
4	Bates Accts Rec.	57	Bates Accts Rec.	4.1	
107	R. F. Brown	57	General Expense	45.	
16	Individuals & Co.	31	Individuals & Co.	7220.14	7220.1
	To transfer to following accounts				
4	R.R. Williams & Son	57	Edwin R. Williams	7220.1	
	R.R. Williams & Son Co. Santa Am 7220.16				
16	Individuals & Co.	31	Individuals & Co.	12.4	12.
	To transfer to Bates & Co. to refund made to S.R. Brown Mfg. Office who paid this amount and which was subsequently collected by us				
4	Bates Accts Rec.	12	S.R. Brown Mfg. Co.	50.4	
107	S.R. Brown Mfg. Co.	12			
113	General Expense	13		59.53.1	59.53.
	To credit account of R.R. Williams & Son Co. Ed. Toronto Canada, with 2% Cash discount on December 31st purchase				
	On				
	R.R. Williams & Son Co. Toronto Canada 59.53.16				

Orange, N.J. December 1906

16	Individuals & Co.	31	Individuals & Co.	475.4	475.
	To transfer amount from above 30 November monies credited to 24 Egan				
16	Egan	30	J. Egan	105.1	
16	Individuals & Co.	31	Individuals & Co.	261	26.
	To transfer credit appearing in % of Kluger to % of Kluger, which is the proper % of Kluger of same being the result of cash in billing				
105	Kluger	30	Kluger	105.1	
113	General Expense	31	General Expense	10000.4	10000.
	To transfer amount of Bates Accts expense for month of December 1906 from Bates Accts Receivable to General Expense				
	Bates Accts Rec.				10000.4.1
	Bates Accts Expense				10000.4
16	Individuals & Co.	31	Individuals & Co.	1465.53.1	1465.53.
	Amount of cash discount deducted in prompt settlement of accounts payable during current month, as recorded in Cash Book 181.4.189 both inclusive				
113	General Expense	31	General Expense	840.14	840.1
	Amount of cash discount allowed in prompt settlement of Bates Accts Rec. during current as recorded in Cash Book 181.4.189 both inclusive				
	Bates Accts Rec.				840.14.1



Orange, N.J. December 1906

716	Individuals & Co.	26617.80
	<u>Sundries</u>	
	For amount of bills entered in Abstract of Sales during month of Dec 1906 as recorded in Journal 113 & 121 which are, and to be credited as follows:-	
717	General Expense	4 13 9/10
718	Machinery & Tools	4 97/11
719	Sales	4 265.50 1/10
720	Manufacturing	4 166.65
716	Individuals & Co.	49.40
	<u>General Expense</u>	
	To correct distribution of voucher 36 November, on which petty cash bill of J. S. Dunham was charged to General Expense instead of his account.	
10	Dunham J.	49.40
717	Sales	28.43 9/10
	<u>Sales</u>	
	To correct error in distributing bills \$755 & \$210 credited to Phonograph instead of Craydine & Binoculars.	
718	Manufacturing	28.43 9/10
719	Manufacturing	106.39
	<u>Manufacturing</u>	
	To consolidate Spring Motor Phonograph for month of December, 1906.	
720	Phonograph	106.39
	<u>Spring Motor</u>	
717	Sundries	656.30 6/10
	<u>Manufacturing</u>	
	For amount of Material vouchers recorded during month of December 1906 as recorded in Register of Disbursements Jnlrs 246-267 are, and to be charged as follows:-	
718	General Expense	1 14.55 9/10
719	Machinery & Tools	37.93 1/10
720	Real Estate & Buildings	20.00 1/10
721	Furniture & Fixtures	27.00 1/10
722	Other Material	57.00 1/10

Orange, N.J. December 1906

717	Sundries	13.34 11.35 1/10
	<u>Individuals &amp; Co.</u>	
	For amount of bills recorded during month of December 1906 as recorded in Register of Disbursements Jnlrs 246-267 are, and to be charged as follows:-	
	<u>General Expense</u>	723 50.51 1/10
	<u>Machinery &amp; Tools</u>	197 166.65 1/10
	<u>Real Estate &amp; Buildings</u>	248 119.46 1/10
	<u>Furniture &amp; Fixtures</u>	248 58.55 1/10
	<u>National Phone Co Interest &amp;</u>	309 1.67 2/10
723	Other Material	213 252.33 9/10
	<u>Manufacturing</u>	
	<u>Individuals &amp; Co.</u>	726 109.16 1/10

Orange, N.Y. January 1<sup>st</sup>, 1907

Mr. Individuals Rec'd

Accounts Payable

20559.1194

20559.1194

I transfer the following accounts balances of Dec. 31, 1906  
from Individuals Rec'd to Accounts Payable, many of these  
being shown on this date for the purpose and credit of  
which a division of the first book, Individuals Rec'd, is.

1. American Nat Bank	2,622.85	1
2. Rogers & Co. Co.	4000.	2
3. American Nat Bank	4755.93	4
4. American Nat Bank	158.73	5
5. American Nat Bank	96	201
6. King & Co.	3520	7
7. Washington Co. Co.	1050	8
8. Thomas & Co. Co.	1672.49	9
9. American Nat Bank	2,152.58	10
10. American Nat Bank	17000	101
11. A. A. Warner Co.	12.25	101
12. A. A. Warner Co.	4000	101
13. American Agricultural Chemicals	532.06	101
14. A. A. Warner Co.	130	201
15. A. A. Warner Co.	150	201
16. A. A. Warner Co.	1806.25	1
17. Boston & Co.	6297.78	3
18. Boston & Co.	1467.31	4
19. A. A. Warner Co.	10320	5
20. American Nat Bank	21122	6
21. Estate of D. Bailey	1000	7
22. A. A. Warner Co.	664	8
23. E. M. Bliss Co.	1152	101
24. Arthur E. Warner	2706	9
25. American Nat Bank	71320	11
26. A. A. Warner Co.	4466	14
27. American Nat Bank	1470	14
28. American Nat Bank	223	13
29. American Nat Bank	1652	201
30. American Nat Bank	1200	101
31. A. A. Warner Co.	69.7	101
32. A. A. Warner Co.	285	201
33. A. A. Warner Co.	911.25	201
34. A. A. Warner Co.	7230	201
35. A. A. Warner Co.	200	201

Forwarded

5197329

Orange, N.Y. January 1<sup>st</sup>, 1907

Forwarded 5197329

1. American Nat Bank	260	201
2. Boston & Co.	7262	201
3. Boston & Co.	2262	201
4. Boston & Co.	2262	201
5. E. M. Bliss Co.	2700	201
6. Arthur E. Warner	2799	1
7. A. A. Warner Co.	850.50	2
8. A. A. Warner Co.	1050	19
9. A. A. Warner Co.	4000	3
10. A. A. Warner Co.	1240	20
11. A. A. Warner Co.	978.75	4
12. A. A. Warner Co.	60.50	5
13. A. A. Warner Co.	1212.91	6
14. A. A. Warner Co.	1211.62	8
15. A. A. Warner Co.	2694	21
16. A. A. Warner Co.	1040	9
17. A. A. Warner Co.	167.70	10
18. A. A. Warner Co.	2350	11
19. A. A. Warner Co.	8731	14
20. A. A. Warner Co.	38449	13
21. A. A. Warner Co.	9025	101
22. A. A. Warner Co.	270	201
23. A. A. Warner Co.	2146	15
24. A. A. Warner Co.	15823	22
25. A. A. Warner Co.	600	17
26. A. A. Warner Co.	1472.18	101
27. A. A. Warner Co.	839	18
28. A. A. Warner Co.	2430	201
29. A. A. Warner Co.	900	101
30. A. A. Warner Co.	170.86	201
31. A. A. Warner Co.	877	201
32. A. A. Warner Co.	1175	201
33. A. A. Warner Co.	1575	2
34. A. A. Warner Co.	1000	7
35. A. A. Warner Co.	1327.16	6
36. A. A. Warner Co.	1467	101
37. A. A. Warner Co.	61.02	201
38. A. A. Warner Co.	25.08	8
39. A. A. Warner Co.	6895.41	101
40. A. A. Warner Co.	25.50	
41. A. A. Warner Co.	121.25	101
42. A. A. Warner Co.	262.23	

Forwarded

5197329

Orange N.Y. January 1<sup>st</sup> 1907.

Forwarded		86.61	53.6
11 Mrs. A. Edison	6999	1	
11 C. R. K. K. K.	5632	2	
5 Edwin Post and Company Co.	7525	4	
9 Edison Storage Battery Co.	6102	5	
11 Electric Chemical Engineering Co.	15765	7	
12 City of New York Co.	1299	8	
12 Copper Wire Co.	98	101	
1 Electric Chemical Works	6875	9	
12 C. Edison	300	10	
100 Electric Co. Station Co.	110	11	
100 Electric Co. Station Co.	00	101	
100 Electric Co. Station Co.	400	101	
100 Electric Co. Station Co.	250	11	
100 Electric Co. Station Co.	5544	1	
3 Electric Co. Station Co.	4444	1	
4 The Electric Co. Station Co.	400	101	
103 C. Mc. Rankin & Co. Station Co.	8550	101	
103 C. Mc. Rankin & Co. Station Co.	120	101	
103 C. Mc. Rankin & Co. Station Co.	3600	101	
103 C. Mc. Rankin & Co. Station Co.	1351	53	1
103 C. Mc. Rankin & Co. Station Co.	4909	1	
103 C. Mc. Rankin & Co. Station Co.	2000	101	
103 C. Mc. Rankin & Co. Station Co.	7090	9	
103 C. Mc. Rankin & Co. Station Co.	1115	44	4
103 C. Mc. Rankin & Co. Station Co.	6654	6	
103 C. Mc. Rankin & Co. Station Co.	2776	8	
103 C. Mc. Rankin & Co. Station Co.	75	101	
103 C. Mc. Rankin & Co. Station Co.	390676	101	
103 C. Mc. Rankin & Co. Station Co.	255	101	
103 C. Mc. Rankin & Co. Station Co.	670810	1	
103 C. Mc. Rankin & Co. Station Co.	7700	1	
103 C. Mc. Rankin & Co. Station Co.	21761	9	
103 C. Mc. Rankin & Co. Station Co.	7650	101	
103 C. Mc. Rankin & Co. Station Co.	120690	11	
103 C. Mc. Rankin & Co. Station Co.	86225	5	
103 C. Mc. Rankin & Co. Station Co.	2995	6	
103 C. Mc. Rankin & Co. Station Co.	20707	1	
103 C. Mc. Rankin & Co. Station Co.	107	101	
103 C. Mc. Rankin & Co. Station Co.	1200	101	
103 C. Mc. Rankin & Co. Station Co.	1470	1	
103 C. Mc. Rankin & Co. Station Co.	442	101	

Forwarded 1149775

Orange N.Y. January 1<sup>st</sup> 1907.

Forwarded		1049775	
208 Stephen G. Boston	25000	101	
208 Stephen G. Boston	4000	1	
208 Stephen G. Boston	17790	1	
208 Stephen G. Boston	2500	1	
208 Stephen G. Boston	24220	101	
208 Stephen G. Boston	57720	1	
208 Stephen G. Boston	4400	101	
208 Stephen G. Boston	1000	101	
208 Stephen G. Boston	2131	101	
208 Stephen G. Boston	2300	1	
208 Stephen G. Boston	7500	4	
208 Stephen G. Boston	1000	1	
208 Stephen G. Boston	556190	1	
208 Stephen G. Boston	250	101	
208 Stephen G. Boston	243079	8	
208 Stephen G. Boston	10999	8	
208 Stephen G. Boston	400	6	
208 Stephen G. Boston	1700	7	
208 Stephen G. Boston	8067	1	
208 Stephen G. Boston	8000	2	
208 Stephen G. Boston	11851	101	
208 Stephen G. Boston	51323	5	
208 Stephen G. Boston	5327	10	
208 Stephen G. Boston	38231	6	
208 Stephen G. Boston	777	7	
208 Stephen G. Boston	507500	8	
208 Stephen G. Boston	1170	9	
208 Stephen G. Boston	1400	101	
208 Stephen G. Boston	60103	11	
208 Stephen G. Boston	2525	101	
208 Stephen G. Boston	187000	101	
208 Stephen G. Boston	500	101	
208 Stephen G. Boston	10300	101	
208 Stephen G. Boston	90	101	
208 Stephen G. Boston	1200	101	
208 Stephen G. Boston	19813	101	
208 Stephen G. Boston	98130	1	
208 Stephen G. Boston	1055	3	
208 Stephen G. Boston	8950	5	
208 Stephen G. Boston	20	6	
208 Stephen G. Boston	2731	6	

Forwarded 1244295

Orange N.J. January 1<sup>st</sup> 1907

Forwarded		188.49 1/2
11 Clinton's Oil Supply Co	7	76.16
12 Clinton's Oil Supply Co	8	5.52 1/2
13 Clinton Co	161	36.00
14 Clinton's Oil Supply Co	360	3.60
15 Clinton's Oil Supply Co	201	16.00
16 Clinton's Oil Supply Co	161	6.96
17 Clinton's Oil Supply Co	50	66.50
18 Clinton's Oil Supply Co	701	67.50
19 Clinton's Oil Supply Co	701	2.06
20 Clinton's Oil Supply Co	701	70.46
21 Clinton's Oil Supply Co	2	54.00
22 Clinton's Oil Supply Co	1	351.23
23 Clinton's Oil Supply Co	101	962.32
24 Clinton's Oil Supply Co	3	91.60
25 Clinton's Oil Supply Co	701	5.25
26 Clinton's Oil Supply Co	101	111.72
27 Clinton's Oil Supply Co	201	342.6
28 Clinton's Oil Supply Co	201	20.55
29 Clinton's Oil Supply Co	1	18.78 1/2
30 Clinton's Oil Supply Co	4	156.02
31 Clinton's Oil Supply Co	3	106.25
32 Clinton's Oil Supply Co	8	72.0
33 Clinton's Oil Supply Co	201	40.50 1/2
34 Clinton's Oil Supply Co	5	280.00
35 Clinton's Oil Supply Co	8	17.95
36 Clinton's Oil Supply Co	6	2.14 7/8
37 Clinton's Oil Supply Co	101	15.57
38 Clinton's Oil Supply Co	701	29.90
39 Clinton's Oil Supply Co	7	46.05
40 Clinton's Oil Supply Co	201	53.21
41 Clinton's Oil Supply Co	1	13.23
42 Clinton's Oil Supply Co	2	27.25
43 Clinton's Oil Supply Co	101	57.75
44 Clinton's Oil Supply Co	701	21
45 Clinton's Oil Supply Co	101	92.77
46 Clinton's Oil Supply Co	701	52.25
47 Clinton's Oil Supply Co	701	16.00
48 Clinton's Oil Supply Co	701	35.94
49 Clinton's Oil Supply Co	1	11.23
50 Clinton's Oil Supply Co	4	65.97
51 Clinton's Oil Supply Co	3	126.00

Forwarded 188.49 1/2

Orange N.J. January 1<sup>st</sup> 1907

Forwarded		188.49 1/2
11 Clinton's Oil Supply Co	8	120.52 1/2
12 Clinton's Oil Supply Co	9	1.20
13 Clinton's Oil Supply Co	6	54.17
14 Clinton's Oil Supply Co	7	13.51 1/2
15 Clinton's Oil Supply Co	10	4.11
16 Clinton's Oil Supply Co	701	5.90
17 Clinton's Oil Supply Co	101	34.50
18 Clinton's Oil Supply Co	701	25
19 Clinton's Oil Supply Co	701	6.00
20 Clinton's Oil Supply Co	101	50
21 Clinton's Oil Supply Co	101	75
22 Clinton's Oil Supply Co	701	4.50
23 Clinton's Oil Supply Co	701	4.61
24 Clinton's Oil Supply Co	701	3.70
25 Clinton's Oil Supply Co	701	2.60
26 Clinton's Oil Supply Co	701	140.00
27 Clinton's Oil Supply Co	701	38.00
28 Clinton's Oil Supply Co	1	1.50 1/2
29 Clinton's Oil Supply Co	4	2.13
30 Clinton's Oil Supply Co	701	5.45
31 Clinton's Oil Supply Co	701	7.30
32 Clinton's Oil Supply Co	701	5.90
33 Clinton's Oil Supply Co	701	20.75
34 Clinton's Oil Supply Co	701	12.05 1/2
35 Clinton's Oil Supply Co	701	3.60
36 Clinton's Oil Supply Co	701	35.00
37 Clinton's Oil Supply Co	5	3.50 1/2
38 Clinton's Oil Supply Co	701	20.00
39 Clinton's Oil Supply Co	701	47.10
40 Clinton's Oil Supply Co	1	9.94
41 Clinton's Oil Supply Co	701	60
42 Clinton's Oil Supply Co	701	5.00
43 Clinton's Oil Supply Co	701	5.11 1/2
44 Clinton's Oil Supply Co	701	31.50 1/2
45 Clinton's Oil Supply Co	701	10.76
46 Clinton's Oil Supply Co	701	17.13 3/4
47 Clinton's Oil Supply Co	701	2.89 1/2
48 Clinton's Oil Supply Co	701	4.97 1/2
49 Clinton's Oil Supply Co	701	2.30 3/4
50 Clinton's Oil Supply Co	701	1.39 1/2
51 Clinton's Oil Supply Co	701	1.50

Forwarded 208.09 1/2

Orange, N.J. January 1<sup>st</sup> 1907

Bills rendered		205.01950
15. Higgins Page	25.50	101
16. R. H. Mann	17.75	101
23. Nathaniel Newby	310.60	101
16. J. J. Williams	38.60	101
101. Nathaniel Newby	30.90	101
101. Nathaniel Newby	23.95	101
101. Walker Electric Co.	306.00	101
101. Walker Electric Co.	460.00	101
101. Walker Electric Co.	442.50	101
101. Walker Electric Co.	282.62	1
101. Walker Electric Co.	3,159.26	101
101. Walker Electric Co.	75.20	101
101. Walker Electric Co.	12.00	201
101. Walker Electric Co.	205.59149	

✓ Sundries

101. Manufacturing  
In amounts as detailed under originally  
charged to Special Ship Order 46 and now transferred to follow

103. Manufacturing

103. Building

104. Machinery &amp; Tools

104. General Expenses

104. Furniture &amp; Fixtures

104. Post Office

104. Miscellaneous Orders

104. Special Ship Order

104. Detail

104. Post Office

104. R. R. F. B.

104. " "

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R. R. F. B.

Miscellaneous Orders

Special Ship Order

Detail

Post Office

R. R. F. B.

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R. R. F. B.

Miscellaneous Orders

Special Ship Order

Detail

Post Office

R. R. F. B.

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R. R. F. B.

Miscellaneous Orders

Special Ship Order

Detail

Post Office

R. R. F. B.

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R. R. F. B.

Miscellaneous Orders

Special Ship Order

Detail

Post Office

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R. R. F. B.

Miscellaneous Orders

Special Ship Order

Detail

Post Office

R. R. F. B.

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Orange, N.J. January 20<sup>th</sup> 1907

Individuals

Individuals

To suspense the following accounts

as

1. Bates Accts Rec

3. suspense

107. H. Edwards &amp; Son

3. suspense

104. Myers Steam Laundry

101. H. Edwards &amp; Son

103. H. Edwards &amp; Son

101. H. Edwards &amp; Son

108. Edwards &amp; Son

General Expense

Individuals

Amount of Cash Disbursements allowed Bates

Accts Rec during month of January 1907

as recorded in Cash Book 107 folio 1A

to 199 inclusive

1. Bates Accts Rec \$100.00

General Expense

Individuals

To transfer amount of Bates Extra

Expense for month of January 1907 from

Bates Accts Rec to General Expense

2. Bates Accts Rec 100.00

1. Bates Extra Expense 100.00

General Expense

Individuals

To credit exp of R. S. Williams &amp; Son Co.

Rt. Toronto Canada with 2% on dis

bursements selected in payment rec'd

this day

1. R. S. Williams &amp; Son Co. Rt. Toronto 23.30

Orange January 1907

755	General Expense	2164	
756	Individuals & Co	✓	2164
	To credit of W. H. Thorne & Co with balance deducted in payment rec'd to day		
1	W. H. Thorne & Co 2 1/2%		
756	Individuals & Co	722.01 ✓	722.01
756	Individuals & Co	✓	722.01
	To transfer the following amount		
1	R. S. Williams & Son Co Jan 21st		
✓	R. S. Williams & Son Co Jan 21st 722.01		
756	Accounts Payable	1307.81 ✓	1307.81
757	General Expense	✓	1307.81
	Amount of cash previously deducted in prompt settlement of accounts payable during month of January 1907 as recorded in Cash Book No 7 folios 19 to 189.		
757	General Expense (mp)	298.4	
758	Accounts Payable	✓	298.4
	The above amount was originally credited to General Expense mp 758 in Petty Cash Book No 75 November 1906 instead of Chas. Sutton clerk #536		
	Chas. Sutton #2.05	✓	
758	Individuals & Co	5461.12 ✓	5461.12
759	Accounts Payable	✓	5461.12
	To transfer the following amount		
1	National Phone Co 6441.12	10	
759	Individuals & Co	1445.11 ✓	1445.11
760	Accounts Payable	✓	1445.11
	To transfer following amount		
1	Edison mp 750 #1445.11	✓	

Orange January 1907

759	Accounts Payable	138.44 ✓	138.44
760	Individuals & Co	✓	138.44
	To transfer the following amounts		
5	Edison Storage Battery 101.47	✓	
1	Thomas Edison 20.30	3	
1	Edison Portland Cement Co 360	4	
1	Edison Chemical Works 10.00	5	
760	Accounts Payable	544.1 ✓	544.1
760	Individuals & Co	✓	544.1
	To transfer following amount		
760	Truba & Richardson 5.44	100	
760	Machinery & Tools	947.8 ✓	947.8
760	Real Estate & Building	✓	947.8
	To transfer above amount representing sundry charges made against S. H. O. #7810 vouchers #19, 23, 24 June 1907 #736 vouchers which properly belonged to S. H. O. #757		
760	Liabilities		
761	Accounts Payable	1307.07 9/41	
	For amount of bills rendered during month of January 1907 as recorded in Register of disbursements folio 260 - 274 due and to be charged on folios.		
761	General Expense	4761.64 ✓	
762	Machinery & Tools	6345.89 ✓	
763	Real Estate & Building	3897.71 ✓	
764	Insurance & Postages	49.67 ✓	
765	National Phone Co 6441.12	1479.61 ✓	
766	Machinery & Tools	2421.08 3/4 ✓	
767	Accounts Payable	1457.21 ✓	



Orange 14 February 1907

25			
176	Individuals	187.14	✓
176	Individuals	✓	187.14
	I transfer the following amounts		
	or		
1	Bates Accts Rec 187.14	Bates Accts Rec 1	
3	Suspense 87	Maigun Radiator Co 50.	
"	" 14.55	Frank Allison 107.	
"	" 9.35	Imperial Bank Bk Co 107	
"	" 764	M. M. Christy Co 101	
"	" 16.00	A. J. Berger Co 101	
"	" 3.34	Ch. Martin & Co 101	
"	" 1.75	Conrad Agency Co 107	
"	" 2.75	Engle Publishing Co 101	
"	" 89.90	Stephen J. Williams 101	
"	" 46.20	Willaburn & Co 101	
171	General Expense	100.00	✓
176	Individuals	✓	100.00
	Transferring amount of Bates Extra Expense for month of February 1907 from Bates Accts Rec to General Ledger		
1	Bates Accts Rec \$100.00		
✓	Bates Extra Expense \$100.00		
9	Profit & Loss	196.14	✓
176	Individuals	✓	196.14
	To write off amount of Bates suspense for fiscal year ending February 28 <sup>th</sup> 1907		
1	Bates Accts Rec 196.14		
5	Bates Suspense 196.14		
171	Accounts Payable	200	✓
176	Individuals	✓	200
	To transfer the above amount from Individuals who ledger to Accts Payable Ledger		
171	Suspense \$2.34	51	
171	Accounts Payable	250	✓
176	General Expense (P. 1)	✓	250
	To correct distribution of January 6 May 1905		
✓ 171	A. Langstaffer \$5.00		

Orange 14 February 1907

25			
171	Accounts Payable	1189.32	✓
176	General Expense	✓	1189.32
	Amount of Cash Discounts deducted in prompt settlement of Accounts Payable during month of February 1907 as recorded in Cash Rec No 8 plus 1.00 inclusive		
171	General Expense	70.65	✓
176	Individuals	✓	70.65
	Amount of Cash Discounts allowed Bates Accts Receivable for prompt payment of bills during month of Feb 1907 as recorded in Cash Rec No 8 plus 1.00 inclusive		
1	Bates Accounts Rec \$70.65		
171	Machinery & Tools	14.76	✓
176	Bal Bates Building	✓	14.76
	To correct distribution of January 6 February on which items were distributed in error to S. L. O. 1781 instead of 1787		
	Memo Cf. Mfgal attached to 1/2 of the date		
171	Manufacturing	415.44	✓
176	Bal Bates Building	✓	415.44
	To correct distribution of January 6 1907 bills owned by which were charged to S. L. O. 1781 instead of 1787		
	Memo Cf. Mfgal attached to 1/2 of the date		
176	Special Order \$415.44		
171	Accounts Payable	146	✓
176	Accounts Payable	✓	146
	To transfer following amounts to suspense		
	or		
✓ 171	Central Business Co 25	Suspense 101	✓
✓ 171	Ricker & Mueller 21	" 9	✓
✓ 171	Suspense 78	Empire Wire Co 701	✓



Orange 29 February 1907

28			
✓ 161	Accounts Payable	2.50 ✓	
✓ 161	Accounts Payable	✓	2.50
	To transfer following c/o as check in payment of same. Voucher #23 June 1907. It never been claimed.		
✓ 161	O. Bellefleur 2.50 Suspense	101	
	Accounts Payable		
	Individuals c/o	0	
	Individuals c/o	0	
	To transfer following item representing check cashed on June 1905 which was intended to pay for present whereabouts of party being unknown.		
	James L. per Suspense		
✓ 161	Accounts Payable	909.30 ✓	
✓ 161	Accounts Payable	✓	909.30
	To transfer the above amount.		
✓ 1	Madison & Co 909.30 National Knobs	101	
✓ 161	Individuals c/o	01 ✓	
✓ 161	Accounts Payable	✓	01
	To transfer the above item.		
✓ 1	Cash Sales .01 Suspense	101	
✓ 161	Sundries		
	Accounts Payable		
	For amount of bills rendered during month of February 1907 as recorded in Register of Disbursements folio 20 to 26 inclusive and to be charged as follows.		
✓ 163	General Expense		
✓ 164	Machinery & Tools	38.66/15 ✓	
✓ 165	Real Estate Building	6.56/79 ✓	
✓ 166	Furniture & Fixtures	7.86/58 ✓	
✓ 167	Material Here to Interest c/o	19.07/55 ✓	
✓ 168	Manufacturing	17.50/73 ✓	
✓ 169	Accounts Payable	17.56/70/22 ✓	
		60.54 ✓	

Orange 29 February 1907

✓ 161	Sundries		
✓ 163	Manufacturing		
	For amount of Raw Material Drawings Voucher during month of February 1907 as recorded in Register of Disbursements folio 285 and to be charged as follows.		
✓ 163	General Expense		
✓ 164	Machinery & Tools	13.02/65 ✓	
✓ 165	Real Estate Building	5.31 ✓	
✓ 166	Furniture & Fixtures	6.48 ✓	
✓ 167	Material Here to Interest c/o	11.17/47 ✓	
✓ 168	Manufacturing	36.06/52 ✓	
✓ 169	Individuals c/o	230.14/88 ✓	
	Sundries		
	Amount of Sales for month of February 1907 as recorded in Abstract of Sales folio 139 to 144 both inclusive and to be credited as follows.		
✓ 169	General Expense		
✓ 169	Sales	✓ 7.99/20	
✓ 169	Manufacturing	✓ 2.25/81/53	
		✓ 3.45/96	
9	Profit & Loss		
✓ 1	Sundries		
	To write off the following accounts.		
✓ 165	Dividend Account		
✓ 169	Bond Interest		
✓ 169	Furniture & Fixtures		
✓ 169	Manufacturing		
	To charge Furniture & Fixtures with Labor & Material charged to Special Shop Orders # 1814 & 1815 up to February 28 1907 being the installation of plumbing, wiring and heating apparatus in building # 18.		
		1814 \$ 3881.79	
		1815 1124.56	
✓ 169	Special Shop Orders \$ 5003.35		

February 1907

113	Manufacturing	28	1949.84X	
113	Manufacturing		\$ 1949.84X	
To transfer amount of labor & material on office Shop Order # 1814718 is charged to July 28 1/2 from office Shop Order account to Miscellaneous Shop Order account # 1814 + 1259.46 + 1810 = \$ 600.00				
work being done for National Phone Co				
101	Miscellaneous Shop Order, 1907	to Office Shop Order # 1814		
144	Sales		46722.72X	
144	Sales		\$ 46722.72X	
To transfer balance of Scrap account to Photograph account.				
104	Scrap	46722.72 Photograph	4	
113	Manufacturing		4296.96X	
113	Manufacturing		\$ 4296.96X	
To transfer balance standing to credit of Japanning account July 28 1/2 by this includes inventory of July 28 1/2				
Value + 140.00				
199	Japanning	+ 4296.76 Photograph	40	
108	Real Estate Building		28466.4	
108	General Expense (3000)		\$ 28466.4	
To correct error in distribution of Shop Order # 1911				
226	Individuals & Co		2685.92X	
257	Accounts Payable		\$ 2685.92X	
To transfer the following accounts				
1	Edison Mfg Co	3323.00	✓	
2	Edison Storage Battery	405.83	✓	
3	Thomas A Edison	5.18	✓	
5	Edison Chemical Co	122.87	✓	

Orange, N.J. February 1907

113	Manufacturing	28	8024.91X	
113	Manufacturing		\$ 8024.91X	
To charge Photograph account with difference in Raw Material account as shown by Inventory of July 28 1/2				
26	Photograph	664.71 (Raw Material)	176	
1	Sundries			
257	Accounts Payable		✓ 1716.27	
For amount of second distribution of numbers for month of February 1907 as recorded in Register of Distribution July 28 1/2				
233	General Expense		487.48X	
192	Machinery & Tools		1094.47 ✓	
208	Real Estate Buildings		121.80X	
213	Manufacturing		250.4	
1	Sundries			
213	Manufacturing		11946.07 ✓	
For amount of second distribution of Material Transfer for month of July 1907 as recorded in Register of Distribution July 28 1/2				
192	Machinery & Tools		849.60X	
213	Manufacturing		1849.67 ✓	
233	General Expense (3000)		18163.1X	
213	Manufacturing		\$ 18163.1X	
To charge Edison's & Edison with difference of Box Factory account as shown by Inventory July 28 1/2				
190	Box Factory	18163.1		
213	Manufacturing		21677.57X	
233	General Expense		✓ 21677.57	
To transfer expenses directly chargeable to Edison Mfg. Co. business for fiscal year ending Feb. 28 1/2				
190	Edison Mfg. Co. Machinery		21677.57	

Orange, N.J. February 1907.

-28-

1	General		
151	Accounts Payable		1657.237
For amount of Bond Distribution of Bonds made of February 1907 as recorded in Register of Disbursements Vol. 256			
204	General Expense	18645.001	
450	National Photo. Co. Interest %	15549.34	
453	Manufacturing	5777.04	
454	Individuals & Co's	21128.41	
455	Accounts Payable		421128.41
To transfer to Co. under National Photograph Co. 21128.41			
1	National Photograph Co.	21128.41	10
456	Accounts Payable		
9	Profit to Loss	744	
Interest for following % 76			
101	Interest	76	74

## Mr. Individuals &amp; Co's

344	Sales	59768.81	59768.81
To charge National Photo. Co. with an amount to make profit on Photograph & other accounts equal 15% of Labor & Material plus General Expense and Depreciation			
	L.M.	Gen. Exp.	15%
Phot.	1632.978.11	512.882.72	10792.56
Wax	677.579.89	72.466.46	602.892.42
			287.567.57
Repaid as shown by Recd. Phot.			
	120.080.28		
	Wax	68.607.53	128.738.76

1	Nat'l. Photo. Co.	89768.81
4	Phot.	67.843.33
9	Wax	21.925.48

Orange, N.J. February 1907

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213	Manufacturing		
234	General Expense		594716.20
To distribute General Expense (Pro rata) over the following Manufacturing accounts.			
	Percentage	27.722.3	
20	Phot.	332.942.24	28.1124.776.49
195	Auto. M. Machine	10.557.52	35.053.37
165	Wax	141.364.98	549.935.32
181	Miscellaneous	5.587.84	12.922.30
186	Fan Motor	52.32	151.53
191	Regist. Instr.	12.700.00	45.011.78
197	Cabinets	102.533.51	378.552.34
		594716.20	

## 244 Sales

213	Manufacturing	2465120.74	
To transfer cost of Sales of the following accounts for the fiscal year ending Feb. 28/07			
4	Photographs	1.319.490.39	20
15	Auto. M. Machine	69.998.65	180
67	Bates Index	1.329.53	118
9	Wax	602.892.43	165
28	Miscellaneous	10.675.14	181
107	Fan Motor	396.74	186
39	Reg. Instr.	50.432.24	171
57	Material Indus.	7.228.00	168
111	Cabinets	4402.469.35	197

## 244 Sales

9	Profit & Loss	317300.24	
To profit realized on the following accounts for year ending Feb. 28/07			
4	Photographs	197.923.56	
15	Auto. M. Machine	12.705.54	
67	Bates Index	1.912.13	
9	Wax	90.584.01	
28	Miscellaneous	39.29.63	
107	Fan Motor	188.16	
39	Reg. Instr.	234.72	
57	Material Sales	174.05	
111	Cabinets	4146.44	

Orange, N.J. February 1907

9 Profit & Loss 28<sup>th</sup>  
 To debit Profit & Loss with amount  
 shown to Feb. 26<sup>th</sup> in the account  
 credited above.

11634.091

11634.09

Orange N.J. March 1907

69 Accounts Payable

1

179 Manufacturing  
 To correct entry of our Vendor +200  
 February 1907 to 189<sup>th</sup> entered in Register  
 of Disbursements as + 189<sup>th</sup>

7 Leggett & Bros + 100<sup>th</sup>Wax + 100<sup>th</sup>

41 General Expense

9

39 Individual &amp; Co

To credit the acct of M.H. Thorne & Co  
 with amount deducted in payment  
 rec'd March 9<sup>th</sup> 1907 in pay<sup>t</sup> of 5/1/07  
 M.H. Thorne & Co 6<sup>th</sup>

✓ Sundries

39 Individual & Co  
 To credit the following amount  
 with 2% cash discount deducted  
 in payment received this day

49 General Expense

49 R.V. Williams & Son Co Ltd Toronto 22<sup>th</sup>7 " " " " " Minneapolis 7<sup>th</sup>

19 General Expense

39 Individual &amp; Co

To credit the following account  
 with discount deducted in pay<sup>t</sup> rec'd this day  
 M.H. Thorne & Co Ltd 9<sup>th</sup>

49 General Expense

39 Individual &amp; Co

To credit the following a/c with  
 cash discount deducted in payment  
 received this day  
 M.H. Thorne & Co Ltd 5<sup>th</sup>

10000

10000

6784

675

2976

2205

741

900

900

540

540

Orange N.J. March 1907

31		
69	<u>Accounts Payable</u>	637.13.4
69	<u>Accounts Payable</u>	637.13.
	To transfer the following amount	
1	Madison & Co 637.13.	
10	National Phone Co 637.13.	
31		
39	<u>Individuals &amp; Co.</u>	11486.47.4
69	<u>Accounts Payable</u>	11486.47.
	To transfer the following amounts	
1	National Phone Co 8879.25.	10
1	Edwin Mfg Co 2911.22.	2
1	Edwin Storage & Bldg Co 10.00	5
3	Homes & Chain 11.35	1
31		
69	<u>Accounts Payable</u>	1095.99.4
99	<u>General Expense</u>	1095.99.
	Amount of Cash Disbursements deducted	
	in prompt settlement of Accounts	
	Payable during month of March 1907	
	as recorded in Cash Book & folio 17 to 19	
99	<u>General Expense</u>	9695.4
39	<u>Individuals &amp; Co.</u>	9698.
	Amount of cash disbursements allowed	
	in prompt settlement of Bates Accts	
	due during current month as recorded	
	in Cash Book & folio 11 thru Cash inclusive	
1	Bates Accts Rec 9698.	
99	<u>General Expense</u>	12800.4
39	<u>Individuals &amp; Co.</u>	12800.
	To transfer amount of Bates & Co	
	Expense for current month from	
	Bates Accts Rec Ledger into General	
	Ledger	
1	Bates Accts Rec 12800.	
1	Bates & Co Expense 12800.	

Orange N.J. March 1907

31		
39	<u>Individuals &amp; Co.</u>	24541.00.00
1	<u>Sundrys</u>	
	For amount of bills entered in Abstract	
	of Sales during month of March 1907	
	as recorded on folio 158 to 170 both inclusive	
	and to be credited as follows	
99	<u>General Expense</u>	14541.1
109	<u>Sales</u>	24541.55.44
31		
69	<u>Sundrys</u>	
	<u>Accounts Payable</u>	1338153.64.
	For amount of bills transferred during month	
	of March 1907 as recorded in Register of	
	Disbursements folio 257 to 259 inclusive	
	and to be debited as follows	
99	<u>General Expense</u>	57870.37.4
749	<u>Machinery &amp; Tools</u>	7289.81.1
749	<u>Rail Cattle &amp; Buildings</u>	3820.53.1
759	<u>Furniture &amp; Fixtures</u>	499.96.4
719	<u>Manufacturing</u>	26665.17.4
69	<u>Accounts Payable</u>	4780.4
31		
1	<u>Sundrys</u>	157647.61.
	<u>Manufacturing</u>	
	For amount of material transferred & allowed	
	during month of March 1907 as recorded	
	in Register of Disbursements, folio 276	
	and to be debited as follows	
99	<u>General Expense</u>	12800.69.4
749	<u>Machinery &amp; Tools</u>	8853.1
749	<u>Rail Cattle &amp; Buildings</u>	120.83.1
759	<u>Furniture &amp; Fixtures</u>	145.99.1
719	<u>Manufacturing</u>	44488.57.4

Orange 29 April

39	Accts Rec	Accts Rec	39	4154	4154
	To transfer the following accounts				
	Bates Accts Rec	415	Bates Accts Rec	1	
1	James Hinton	100	United States Government	1	
3	Impense	50	St. Louis Sons Co	1	
3		210	Locher & Smith & Washburn	100	
53	H. H. & Son	18	Impense	3	
53	Impense	10	St. Ketchum	50	
53	A. H. Hinton	27	Living Valley R.R. Co	57	
69	Accounts Payable		1266.41		
69	Accounts Payable	Accounts Payable	1266.41		
	To transfer following to Bates of National House Co				
10	National House Co	1766.75	Edwin Redland Smith	12	
99	General Expense		705		
29	General Expense	Accounts Receivable	705		
	To credit of W. H. Thorne & Co				
	Says W. H. Thorne & Co with 5% cash discount deducted in payment, read this day				
1	W. H. Thorne & Co Ltd	725			
99	General Expense		6127.4		
29	General Expense	Accounts Receivable	6127.4		
	To credit the following accounts with cash amounts deducted in April payments				
1	As Williams Sons Co Dents	57.20			
1	" " Ministry	16.05			
1	W. H. Thorne & Co	676			
1	Bates Kelly	675			
99	General Expense		1858		
29	General Expense	Accounts Rec	1858		
	To credit the following account with cash amounts deducted in payment, read this day				
1	W. H. Thorne & Co Ltd	1554			

Orange 29 April 1907

69	Accounts Payable		1171.464		
99	General Expense		1171.464		
	Amount of cash amounts deducted in prompt settlement of Accounts Payable during month of April 1907 as recorded in Cash Book & folios 21 to 25 inclusive				
99	General Expense		68.15		
29	General Expense	Accounts Receivable	68.15		
	Amount of cash amounts allowed in prompt settlement of Bates Accts Rec for month of April 1907 as recorded in Cash Book & folios 21 to 25 both inclusive				
1	Bates Accounts Receivable	68.15			
99	General Expense		85.4		
69	General Expense	Accounts Payable	85.4		
	To credit John Johnson & Co account with amount deducted in overpayment, short for overpayment, removed Apr. 7 for 41.54				
99	General Expense		1000.00		
29	General Expense	Accounts Receivable	1000.00		
	To transfer amount of Bates Extra Expense for month of April 1907 from Bates Accts Receivable to General Ledger				
1	Bates Accounts Receivable	100.00			
1	Bates Extra Expense	100.00			
29	Accounts Receivable		277.58.164		
	Succeeded				
	Amount of Sales for month of April 1907 as recorded in Abstract of Sales folios 17 to 18 both inclusive and to be credited as follows				
99	General Expense		586.69		
109	Sales		5277.8206		

Orange 29 April 30<sup>th</sup> 1907

✓	<u>Debit</u>	<u>Accounts Payable</u>	1246 62 05
69		For amount of bills vouchers during month of April 1907 as recorded in Report of Disbursements folios 281-285	
		It is said to be changed as follows.	
99		General Expense	144 46 54 1/2
749		Machinery & Tools	344 1 60 1/2
760		Real Estate & Buildings	13 19 79 1/2
730		Furniture & Fixtures	140 7 32 1/2
9		Automobiles	300 00 0
174		Manufacturing	200 5 11 60 1/2
69		Accounts Payable	60 55 1/2
✓	<u>Debit</u>	<u>Manufacturing</u>	4 70 89 35 1/2
174		For amount of material transferred to month of April 1907 as recorded in Report of Disbursements folios 285 to be changed as follows.	
99		General Expense	14 100 26 1/2
749		Machinery & Tools	50 70 1/2
760		Real Estate & Buildings	50 95 1/2
730		Furniture & Fixtures	15 8 89 1/2
174		Manufacturing	54 53 1 72 1/2
30		<u>Accounts Receivable</u>	248 99 0 1/2
69		<u>Accounts Payable</u>	1 248 99 0 1/2
1		To transfer the following amounts	
1		National Trust Co	200 00 0 1/2
1		Edwin May Co	17 61 25 1/2
5		Edwin Chemical Works	115 00
✓		Edwin Storage Battery	17 51
3		Thomas A Edison	6 76

Orange 29 May 1907

✓	<u>Debit</u>	<u>Accounts Payable</u>	6018 00 1/2
69		For dividend of 1 <sup>st</sup> per share on all the stock of the company entitled thereto payable May 20 <sup>th</sup> 1907	✓ 6018 00
174		Edwin Batchelor 248 946 shares @ 1% 310 45 10 1/2	
174		Thomas A Edison 146 75 " " 183 84 11 1/2	
174		Henry B Buckle 460 000 " " 318 55 10 1/2	
174		International Explosives 1430 000 " " 178 75 10 1/2	
174		Thomas A Edison 220 110 " " 27 89 0 1/2	
174		John H Randolph 10 000 " " 18 55 10 1/2	
174		W. C. Schumacher 142 000 " " 203 75 10 1/2	
174		John H Schumacher 5 000 " " 6 75 9	
174		Charles C May 5 000 " " 6 75 10 1/2	
174		E. D. Phillips 5 000 " " 6 75 10 1/2	
31		<u>Accounts Receivable</u>	197 1/2
39		<u>Accounts Receivable</u>	✓ 197
39		To transfer the following amounts	
1		Bates Accts Rec 197 Bates Accts Rec 1	
8		Bates Accts Rec 34 Surplus 3	
100		Park & Long Co 05 " "	
104		Railway of N. C. 10 " "	
104		Geo A Allen 10 " "	
103		Albright Paper Co 15 " "	
104		H. C. Stone 59 " "	
50		Edgar Brewster 07 F. C. Ransom 50	
69		<u>Accounts Payable</u>	79 85 1/2
69		<u>Accounts Payable</u>	✓ 79 85 1/2
201		To transfer following items to surplus of	
201		National Trust Co & 67 N. Surplus 101	
201		James H Langlin Co 12 00 " 101	
99		General Expense	125 00 0 1/2
39		<u>Accounts Receivable</u>	1 125 00
1		To transfer amount of Bates & Co Expense for month of May 1907 from Bates Accts Receivable to General Ledger	
1		Bates Accts Receivable \$125 00	
✓		Bates Accts Co Expense 125 00	

Orange 29 May 1907

30	<u>Accounts Receivable</u>	2601.25	✓
✓	<u>Debit</u>		
	Amount of Sales for month of May 1907 as recorded in <u>Abstract of Sales</u> folios 16 to 20 both inclusive and to be credited as follows:		
49	<u>General Expense</u>	✓	153.71
749	<u>Machinery &amp; Tools</u>	✓	12.75
149	<u>Salaries</u>	✓	1280.25
69	<u>Accounts Payable</u>	2880.4	✓
69	<u>Credit</u>		2880.
	To transfer following items to suspense of suspense		
101	Purchase 25.00 Melburn & Payer, 101		
101	3.50 Santa Monica & Main 101		
39	<u>Accounts Receivable</u>	6156.24	✓
69	<u>Accounts Payable</u>	✓	6156.24
	To transfer the following accounts:		
1	Edison Manufacturing Co. 2471.77	✓	
1	National Phone Co. 3777.91	10.	
✓	Edison Storage Battery Co. 164.00	5.	
3	Thomas A. Edison 8.36	1.	
5	Edison Chemical Works 1.31	9.	
49	<u>General Expense</u>	6955.4	✓
39	<u>Accounts Receivable</u>	✓	6988.
	Amount of Cash Disbursements allowed to <u>Accounts Receivable</u> during month of May 1907 as recorded in <u>Cash Book</u> folios 30 to 35 both inclusive		
1	Butter <u>Accounts Receivable</u> \$69.88		
69	<u>Accounts Payable</u>	1716.18	✓
49	<u>General Expense</u>	✓	1716.18
	Amount of Cash Disbursements deducted in prompt settlement of <u>Accounts Payable</u> during month of May 1907 as recorded in <u>Cash Book</u> folios 36 to 38 inclusive		

Orange 29 May 1907

77	<u>General Expense</u>	6662.4	✓
39	<u>Accounts Receivable</u>	✓	6612
	Amount of Cash Disbursements allowed to <u>Accounts Receivable</u> during month of May 1907 as recorded in <u>Cash Book</u> folios 30 to 35 inclusive		
✓	<u>Debit</u>		
149	<u>Manufacturing</u>	17205.45	✓
	For amount of Raw Materials transferred during month of May 1907 as recorded in <u>Register of Disbursements</u> folios 310 to 321 and to be charged as follows:		
49	<u>General Expense</u>	14260.04	✓
149	<u>Machinery &amp; Tools</u>	115.59	✓
149	<u>Raw Materials &amp; Buildings</u>	44.08	✓
149	<u>Furniture &amp; Fixtures</u>	37.74	✓
149	<u>Manufacturing</u>	57890.62	✓
✓	<u>Debit</u>		
69	<u>Accounts Payable</u>	15069.79	✓
	For amount of bills rendered during month of May 1907 as recorded in <u>Register of Disbursements</u> folios 310 to 321 and to be charged as follows:		
49	<u>General Expense</u>	42999.00	✓
149	<u>Machinery &amp; Tools</u>	12789.62	✓
149	<u>Raw Materials &amp; Buildings</u>	8674.37	✓
149	<u>Furniture &amp; Fixtures</u>	16703.4	✓
9	<u>Automobile</u>	6800.00	✓
149	<u>National Phone Co. Interest etc.</u>	2254.68	✓
149	<u>Manufacturing</u>	22500.67	✓
69	<u>Accounts Payable</u>	6657.4	✓



Orange N.J. May 1917

## General Expenses

amount of cash disbursements as recorded  
 shown on check No. 107 as recorded  
 in cash book No. 107 as recorded  
 under date of May 10<sup>th</sup> 1917 for \$507.50  
 amount 5% returned

## Accounts Payable

560 ✓

560

Orange N.J. June 1917

## Notes Receivable

6

Notes payable one year from date,  
 particulars in envelope # 149

2000.00 ✓

2000.00

## Accounts Receivable

20

To transfer the following amount, including  
 period June 7<sup>th</sup> 1917 - 06% from J. J. Sullivan  
 Center in Bankruptcy for the Cullen Co  
 Center this coming second and final  
 dividend of 3  $\frac{1}{2}$ % declared by Harold  
 Remington, Receiver

06 ✓

06

1 Bates Accts Rec 06 Bates Accts Rec 1  
 101 H. Cullen Co 06 Suspense 1

21

## Accounts Receivable

14.00 ✓

14.00

To transfer the following amount

1 Bates Accts Rec 14.00 Bates Accts Rec 1  
 50 Vance Redwood Lumber Co 14.00 Vance Redwood Lumber Co 50

22

## Accounts Receivable

17.50 ✓

17.50

To transfer the following amount, Bal 2/15/17

1 Bates Accts Rec 17.50 Bates Accts Rec 1  
 6 Custom House N.Y. 1.25 U.S. Government 1

23

## Accounts Payable

4000.00 ✓

4000.00

To transfer Petty cash fund of \$400.00

201 City Hall Petty Cash Fund \$400.00 J. A. Morrison 201

30

## General Expenses

100.00 ✓

100.00

To correct distribution of March 1917

466-67 1/2 April 1917 on which time of 142.50 was  
 for work done on Hotel Shop order was charged  
 to Miscellaneous Orders instead of Cash B from Hotel

201 Miscellaneous Orders \$100.00

121

Orange 29 June 1907

69	Accounts Payable	1400.10	
99	General Expense	✓ 1800.10	
	Amount of Cash Disbursements deducted in through settlement of Accounts Payable during month of June 1907 as recorded in Cash Book 268 folios 39 to 47 inclusive		
39	Accounts Receivable	12689	
69	Accounts Payable	✓ 12689	
	To transfer the following accounts		
1	Edison Mfg Co	3698 $\frac{1}{4}$	✓
1	National Knos Co	388 $\frac{1}{4}$	10
✓	Edison Storage Battery Co	3.38	5
3	Shaw-Walker & Co	54	✓
✓	National Knos Co Cash & Cr	7.29	14
39	Accounts Receivable	283690.52	
✓	Sundry		
	Amount of bills entered in Abstract of Sales during month of June 1907, recorded in folios 20 to 202 inclusive, and to be credited as follows		
169	Sales	✓ 283690.52	
99	General Expense	✓ 409.58	
39	Accounts Receivable	1871	
39	Accounts Receivable	✓ 1871	
	Bills this day 1871 from Valentine's Stamp Co payable at Merchants National Bank, New Haven Ct in settlement of account to March 12, 1907 at 1 month due July 15, 1907		
1	Bates Accts Rec	18.24	1
✓	Bates Notes Receivable	1871	1
99	General Expense	7700	
39	Accounts Receivable	✓ 7700	
	For amount of Cash Disbursements allowed Accounts Receivable during month of June 1907 as recorded in Cash Book 268 folios 39 to 47 inclusive		

Orange 29 June 1907

99	General Expense	10000	
39	Accounts Receivable	✓ 10000	
	To transfer amount of Bates Extra Expense for month of June 1907 from Bates Accts Rec to General Expense		
1	Bates Accts Rec	\$100.00	
✓	Bates Extra Expense	100.00	
99	General Expense	7971	
39	Accounts Receivable	✓ 7971	
	Amount of Cash Disbursements allowed Bates Accts Rec during month of June 1907 as recorded in Cash Book 268 folios 39 to 47 inclusive		
1	Bates Accounts Rec	79 $\frac{1}{4}$	
99	General Expense	26	
69	Accounts Payable	✓ 26	
	Amount of cash Disbursements allowed Accounts Payable during month of June 1907 as recorded in Cash Book 8 folios 48		
✓	Sundry	229785.50	
69	Accounts Payable		
	Amount of bills rendered during month of June recorded in Register of Disbursements folios 310 to 319 & to be charged to		
99	General Expense	55706.00	
269	Machinery & Tools	636.78	
269	Real Estate & Building	8675.88	
209	Furniture & Fixtures	919.47	
179	Manufacturing	22800.62	
69	Accounts Payable	12689	
✓	Sundry		
179	Manufacturing	✓ 77965.40	
	Amount of Cash Disbursements allowed during month of June as recorded in Register of Disbursements folios 319 to 324 & to be charged to		
99	General Expense	10806.71	
269	Machinery & Tools	2471	
269	Real Estate & Building	3993	
209	Furniture & Fixtures	144.37	
179	Manufacturing	6193.24	

Orangang July 1907

39	Accounts Receivable	257	
39	Accounts Receivable		257
	To transfer the following amounts		
100	Imperial Bank Note Co. 25		
	25 Batas Accts Rec		
	25 Imperial Bank Note Co. 101		
39	Accounts Receivable	1854	
39	Accounts Receivable		1854
	To transfer the following amounts		
1	Batas Accts Rec 185		
101	Imperial Bank Note Co. 185		
	Imperial Bank Note Co. 3		
99	General Expenses	12500.1	
39	Accounts Receivable		12500.1
	To transfer amount of Batas Accts Rec		
	during month of July 1907 from Batas Accts		
	Rec to General Ledger		
1	Batas Accts Rec * 125.00		
✓	Batas Accts Rec 125.00		
39	Accounts Receivable	4194	
39	Accounts Receivable		4194
	To transfer to following amounts		
1	Batas Accts Rec 419		
50	Ct. Kitchellman 10		
50	Widder Batas 59		
51	Gooding Co 06		
3	Superfence 14		
	Superfence 64		
61	Standard Batten Co 35		
100	Lawrence Natl Bank 35		
6	Batten House 175		
100	W.S. Government 13		
100	Superfence 06		
69	Accounts Payable	157624.1	
99	General Expenses		157624.1
	Amount of Cash Disbursements deducted in		
	prompt settlement of Accts Payable during current		
	month as recorded in Cash Book No 8 folios		
	45 to 56 inclusive		

Orangang July 1907

99	General Expenses	57864	
39	Accounts Receivable		57864
	Amount of Cash Disbursements allowed in		
	prompt settlement of Batas Accts Rec		
	during current month as recorded in		
	Cash Book No 8 folios 45 to 56 inclusive		
1	Batas Accts Rec 57864		
99	General Expenses	48444	
39	Accounts Receivable		48444
	Amount of Cash Disbursements allowed in		
	prompt settlement of Batas Rec during		
	month of July 1907 as recorded in		
	Cash Book No 8 folios 45 to 56 inclusive		
69	Accounts Payable	227134	
69	Accounts Payable		227134
	To transfer following amount to		
	National Phone Co. as follows		
1	National Phone Co 227		
	Edison Portland Cement Co. 11		
69	Accounts Payable	257	
39	Accounts Receivable		257
	To transfer the following amount		
313	Blodgett Knapf Blodgett 25		
	Imperial Bank Note Co. 100		
39	Accounts Payable	128050.1	
39	Accounts Payable		128050.1
	To transfer following to General Ledger		
101	Liability Insurance Reserve Fund * 1280.50		
69	Accounts Payable	9814184	
39	Accounts Payable		9814184
	To transfer following to General Ledger		
101	Liability Insurance Reserve Fund * 9814184		
99	General Expenses (Net)	2474	
39	Machinery & Tools		2474
	To correct error in distribution of G.O. * 2027		
	on Pay Roll voucher * 464 April 1907		

Orange 29 July 1907

99 General Expense (May 2)	101.1004	
249 Machinery & Tools	✓ 101.1004	
In correct error in distribution of \$10.250-207 & 21.75 on Pay Roll Vouchers #568-171-171 May 4-18-20-21 1907		
69 Accounts Payable	1357.0991	
39 Accounts Receivable	✓ 1357.0991	
In transfer to following accounts		
10 National Phone Co N. 427 St	1	
14 Edison Mfg Co 20.73 75	1	
5 Edison Storage Battery Co 147.65	✓	
1 Thomas A Edison 8.55	3	
9 Edison Chemical Works 93	5	

✓ Sundries

119 Manufacturing	✓ 700.8944	
For amount of Raw Material transfers Vouchers during month of July 1907 as recorded in Register of Instruments folios 330 and to be charged to		

99 General Expense	50387.764	
249 Machinery & Tools	119.284	
249 Real Estate Building	33.004	
289 Furniture & Fixtures	190.824	
119 Manufacturing	613.51744	

✓ Sundries

69 Accounts Payable	✓ 4321.92101	
For amount of bills Vouchers during month of July as recorded in Register of Instruments folios 321 to 331 and to be charged to		

99 General Expense	50387.764	
249 Machinery & Tools	57.7984	
249 Real Estate Building	923.8764	
289 Furniture & Fixtures	1019.954	
249 National Phone Co N. 427 St	582.004	
119 Manufacturing	2419.55164	
69 Accounts Payable	107.004	

Orange 29 July 1907

39 Assets Receivable	✓ 169401.644	
Sundries		
For amount of Sales as recorded in Abstract of Sales during month of July 1907 folios 211 to 231 in duplicate, and to be credited as follows		
119 Sales	✓ 169660.84	
10 General Expense	✓ 2279.80	

Orange, N.J. August 1907

69	Accounts Receivable	8.00 ✓	
69	Accounts Receivable	✓	8.00
	To transfer the following amount		
1	Bate Accts Rec 8.00	Bate Accts Rec	1
100	J. J. Kennedy 5.50	Norris & Parsons	100
3	Surpense 2.20		100
69	Accounts Receivable	3.00 ✓	
69	Accounts Receivable	✓	3.00
	To transfer the following amount		
100	Norris & Parsons 3.00	Bate Accts Rec	1
	3.00	Norris & Parsons	100
69	Accounts Receivable	31.34 ✓	
69	Accounts Receivable	✓	31.34
	To transfer the total amount of the following bills: "1st 20457-27"		
	"1st 20457-28" "2nd 20457-117"		
1	Bate Accounts Rec 31.34	Bate Accts Rec	1
50	Barnett Printing Co 31.34	Barnett Printing House	50
69	Accounts Receivable	23.00 ✓	
69	Accounts Receivable	✓	23.00
	To write off the following amount		
1	Bate Accts Rec 23.00	Bate Accts Rec	1
3	Surpense 23.00	Oliver & Zepher Co	101
69	Accounts Receivable	34 ✓	
69	Accounts Receivable	✓	34
	To write off the following amount		
1	Bate Accts Rec 34	Bate Accts Rec	1
3	Surpense 17	Offspring & Sons	50
	7	G. E. Parsons	50
69	Accounts Receivable	6.18 ✓	
69	Accounts Receivable	✓	6.18
	To transfer the above amount		
1	National Phone Co. Orange 6.18	Bate Accts Rec	1
	6.18	National Phone Co. Ltd	51

Orange, N.J. August 1907

319	Dividends	20	
69	Accounts Payable	6018.00 ✓	
	To a dividend of 1.25 per share on all the stock of the Company entitled thereto payable August 20 <sup>th</sup> 1907		
	Charles B. Batcher	248.40	310.55/101
	Mr. Thomas A. Edison	466.75	582.44/101
	Henry B. Ackinslow	76.00	312.50/101
	International Telegraphs	1430.00	1787.50/101
	Thomas A. Edison	2281.25	2789.01/101
	John F. Randolph	10.00	12.45/101
	William C. Gilmore	163.000	202.75/101
	Alphonse Wenter	5.000	6.25/101
	Paul C. May	5.000	6.25/101
	E. D. Phillips	5.000	6.25/101
	(Dividend for 32)		
69	Accounts Payable	28.20 ✓	
69	Accounts Payable	✓	28.20
	To transfer following amount		
101	Surpense 28.20	Fred Berger	101
69	Accounts Payable	300 ✓	
69	Accounts Payable	✓	300
	To transfer the following amount		
101	J. J. Kennedy 3.00	Norris & Parsons	100
39	Accounts Receivable	17.7 ✓	
69	Accounts Payable	✓	17.7
	To transfer the above amount		
1	Bate Accts Rec 17.7	Mell, Fargo & Co. Expr	1
	17.7	Wells Fargo & Co. Expr	17.7
199	Bond Interest	630.00 ✓	
109	Bond Interest	✓	630.00
	To amount of Bond Interest due this day on coupon # 20.		

Orange N.J. August 1907

39	Accounts Receivable	1747	
40	Accounts Receivable	✓	175
	To transfer the following amounts		
	Bates Accts Rec 174	Bates Accts Rec	1
	Standard Steel Car Co 174	American Steel & C.	50
100	General Expense	100000	
40	Accounts Receivable	✓	10000
	To transfer amount of Bates Accts Expense		
	for month of August 1907 from Bates Accts		
	Rec to General Expense		
	Bates Accts Rec \$100.00		
	Bates Accts Expense \$100.00		
100	General Expense	44434	
40	Accounts Receivable	✓	44434
	Amount of Cash Disbursements allowed		
	Bates Accts Rec during month of Aug 1907		
	as recorded in Cash Book No 8 folios 97 to 100		
	Bates Accounts Receivable \$444.34		
60	Accounts Payable	71461	
100	General Expense	✓	71461
	Amount of Cash Disbursements deducted in		
	prompt settlement of Accounts Payable		
	during month of August 1907 as recorded		
	in Cash Book No 8 folios 97 to 104		
100	General Expense	22944	
40	Accounts Receivable	✓	22944
	For amount of Cash Disbursements allowed		
	Accts Rec during month of August 1907		
	as recorded in Cash Book No 8 folios 97 to 100		
60	Accounts Payable	621	
100	General Expense	✓	621
	For amount of Cash Disbursements allowed		
	W. H. H. to balance our account No 885		
	as recorded in Cash Book No 8 folios 53		

Orange N.J. August 1907

39	Accounts Receivable	201005	2014
40	Accounts Receivable	✓	201005
	For amount of bills recorded in		
	Abstract of Sales folios 232 to 245		
	during month of August 1907 and		
	to be credited as follows		
100	General Expense	✓	22048
100	Sales	✓	120120
69	General Expense	✓	136435
	For amount of bills recorded during		
	month of August 1907 as recorded in		
	Register of Disbursements folios 301 to 303		
	and to be charged as follows		
100	General Expense	58447	461
100	Machinery & Tools	6029	681
100	Rail Road Buildings	22983	754
100	Furniture & Fixtures	1196	881
100	Manufacturing	280619	201
69	Accounts Payable	75	974
69	General Expense	✓	170970
	For amount of Notes transferred		
	during month of August 1907 as recorded		
	in Register of Disbursements folios 343		
	and to be charged to		
100	General Expense	9527	007
100	Machinery & Tools	77	491
100	Rail Road Buildings	101	401
100	Furniture & Fixtures	844	101
100	Manufacturing	63918	724

Orange 79 August 1907

100	General Expense (Subd)	300	1
769	Real Estate & Bldg	✓	300
To correct error in Journal Entry 767, which was entered to correct error in distribution of Ship orders #1911. The above amount covers March & October 796 and was posted to Dr. #1911, in error as same covers labor on Dr. #1811 and should not have been included in entry of July 28/1907			
69	Accounts Payable	4462.54	
40	Accounts Receivable	✓	4462.54
To transfer the following accounts:			
1	National Phone Co	1	1
2	Edwin Mfg Co	1590.45	1
14	National Phone Co Longtuff	11.05	✓
5	Edwin Storage Battery Co	340	✓
69	Accounts Payable	1314	
69	Accounts Payable	✓	1314
To transfer the above amount			
5	Edwin Storage Battery 1 <sup>st</sup> Edwin Eden Works	9	
Accounts Payable			
Accounts Payable			
To transfer following of from National Phone Co			
10	National Phone Co	701	701
Accounts Payable			
Accounts Payable			
To transfer following to surplus of			
101	Surplus	54	701
101	54	John H. Van Horn	701
Accounts Payable			
Accounts Payable			
To transfer following to National Phone Co			
10	National Phone Co	3240	3240
Accounts Payable			

Orange 79 September 1907

40	Accounts Receivable	10.37	✓
40	Accounts Receivable	✓	10.37
To transfer the following accounts:			
1	Bates Accts Rec	10.37	1
104	Edwin Mfg Co	05	3
55	Harold's Mfg Co	8.00	53
2	Surplus	07	53
50	A. E. Ransom	1.75	104
117	Munroe's Printing Co	50	5
100	General Expense	10000	✓
40	Accounts Receivable	✓	10000
To transfer amount of Bates Accts Rec for month of September 1907 from Bates Accts Rec to General Expense			
1	Bates Accts Rec	100.00	
✓	Bates Accts Rec	100.00	✓
100	General Expense	48.54	✓
40	Accounts Receivable	✓	48.54
Amount of Cash Disbursements allowed Bates Accts Rec for prompt settlement of accounts during month of September 1907 as recorded in Cash Book & folio 65 to 73 inclusive			
7	Bates Accts Receivable	148.54	
100	General Expense	10.85	✓
40	Accounts Receivable	✓	10.85
Amount of Cash Disbursements allowed Accounts Receivable during month of September 1907 as recorded in Cash Book & folio 65 to 73 inclusive			
69	Accounts Payable	1817.74	✓
100	General Expense	✓	1817.74
Amount of Cash Disbursements deducted in prompt settlement of Accounts Payable during month of September 1907 as recorded in Cash Book & folio 65 to 73 inclusive			

Orange Nj September 1907

40	Accounts Receivable	286500.84
✓	<u>Sundries</u>	
	For amount of Sales during month of September 1907, as recorded in Abstract of Sales folios 245 to 266 and inclusive and to be credited as follows	
100	General Expense	✓ 292.78
119	Sales	✓ 286798.06
✓	<u>Sundries</u>	
119	<u>Manufacturing</u>	✓ 77467.35
	For amount of Raw Material Transfers recorded during month of September 1907 as recorded in the Register of Disbursements folios 554 and to be charged as follows	
100	General Expense	14718.34
119	Machinery & Tools	25880.4
126	Rail Car & Building	17.62
137	Furniture & Fixtures	441.19
119	Manufacturing	62011.40
✓	<u>Sundries</u>	
69	<u>Accounts Payable</u>	✓ 27787.18
	For amount of Bills Rendered during month of September 1907 as per record in Register of Disbursements folios 344 to 354 inclusive and to be charged to	
100	General Expense	43484.21
119	Machinery & Tools	7958.69
126	Rail Car & Building	11709.91
137	Furniture & Fixtures	4688.64
119	Manufacturing	6083.64
69	Accounts Payable	2059.85
		11230.4
✓	<u>Accounts Payable</u>	
110	<u>Accounts Payable</u>	1537.00
	To transfer the following accounts	✓ 1837.00
10	Interstate Commerce Co	✓ 577.40
11	General Expense	✓ 52.47
12	General Expense	✓ 46.
13	General Expense	✓ 11.70
14	General Expense	✓ 328.20
15	National Oil & Gas Co	✓ 116.30

Orange Nj October 1907

✓	<u>Sundries</u>	
40	Accounts Receivable	✓ 260000
	Received this day from Notes from M.W. Swift Co. for \$650 each payable at Orange Nj one two three & four months from date of settlement of this account to September 1st 1907	
110	Notes Receivable	650.00
✓	<u>Notes Receivable</u>	
4	M. W. Swift & Co. Ltd	✓ 650.00
4	" " " "	✓ 650.00
4	" " " "	✓ 650.00
4	" " " "	✓ 650.00
15		
119	Interinsurance Reserve Fund	90000
301	Interposition Insurance Reserve Fund	✓ 9000
	To transfer above amount representing bill premium on shipment insurance which was credited to former on July 1st 1907 (Memo A.C. Book 1906)	
✓	<u>Accounts Payable</u>	
69	<u>Accounts Payable</u>	16250
	To transfer following amount to National Home Co Redgers.	
1	National Home Co	✓ 16250
✓	<u>Accounts Receivable</u>	
40	<u>Accounts Receivable</u>	49.15
	Note received this day from H.S. Superior Sales & Stamp Co. payable in one month at the Commercial State Bank set out with to balance account to Oct. 1st 1907	
1	State Accts. Rec.	✓ 49.15
50	State Notes Receivable	✓ 49.15



Orange 24 October 1907

100	<u>General Expense</u>	51	125.00	✓	
140	<u>Accounts Receivable</u>		✓	125.00	
	Transferring amount of Bates Extra Co. general during month of October 1907 from Bates Extra Pm to General Ledger				
	Bates Accounts Pm #125.00				
	Bates Extra Expense 125.00				
100	<u>General Expense</u>		42.80	✓	
140	<u>Accounts Receivable</u>		✓	42.80	
	Amount of Cash Discounts allowed accounts Receivable during month of October 1907 as recorded in Cash Book No 8 folios 78 to 81 inclusive				
	"				
100	<u>General Expense</u>		34.89	✓	
140	<u>Accounts Receivable</u>		✓	34.89	
	Amount of Cash Discounts allowed Bates Accounts Receivable for prompt settlement of bills during month of Oct. 1907 as recorded in Cash Book No 8 folios 78 to 81 inclusive				
	Bates Accounts Pm 134.89				
70	<u>Accounts Payable</u>		1007.17	✓	
100	<u>General Expense</u>		✓	1007.17	
	Amount of Cash Discounts deducted in prompt settlement of Accounts Payable during month of October 1907 as recorded in Cash Book No 8 folios 76 to 81 inclusive				
60	<u>Accounts Receivable</u>		347.24	✓	
	<u>Sundries</u>				
	For amount of bills entered in Abstract of Sales during month of October 1907 as recorded on folios 268 to 284 both inclusive and to be credited as follows				
100	<u>General Expense</u>				
140	<u>Sales</u>		✓	203.38	
				346.96	39

Orange 24 October 1907

70	<u>Accounts Payable</u>	51			
140	<u>Accounts Receivable</u>		402.75	✓	402.75
	In transfer the following amounts				
10	National Phone Co	6.76	25	1	
5	Edison Storage Battery Co	6.45		2	
1	Thomas A. Edison	1.40		3	
4	National Phone Company			4	
3	Edison Mfg Co	207.46	01	1	
70	<u>Accounts Payable</u>		162.50	✓	162.50
140	<u>Accounts Payable</u>				
	In transfer amount of cash bills & M. 1907 to				
	Books of National Phone Co				
1	National Phone Co	162.50	Edison Portland Cement Co		
60	<u>Accounts Receivable</u>		846.01	✓	846.01
140	<u>Accounts Receivable</u>				
	Correct error in Abstract of Sales Dec 1906				
	Now correctly charged to National Phone Co				
	Bills of National Phone Co. 1907				
	Public R. M. Co. 1907 515.46				
2	National Phone Co				
✓	<u>Sundries</u>				
30	<u>Accounts Payable</u>		436.81	✓	79
	For amount of bills rendered during month of October 1907 as recorded in Register of Disbursements folios 269-311 and to be charged as follows				
100	<u>General Expense</u>		57.31	✓	401
140	<u>Machinery &amp; Tools</u>		704.60	✓	
140	<u>Real Estate &amp; Building</u>		13.27	✓	081
140	<u>Furniture &amp; Fixtures</u>		19.20	✓	641
140	<u>Utilities Insurance &amp; Rent</u>		329.75	✓	
140	<u>National Phone Co</u>		301.04	✓	461
140	<u>Manufacturing</u>		29.75	✓	894
70	<u>Accounts Payable</u>		130.43	✓	

## Orange 29 October

✓	<u>Sundries</u>	
179	<u>Manufacturing</u>	✓ 8546.03
	For amount of Raw Material Transfers bunched during month of October 1907 as recorded in Register of disbursements folio 541 and to be charged as follows	
100	<u>General Expense</u>	18133.524
149	<u>Machinery &amp; Tools</u>	640.864
146	<u>Rail Estate &amp; Buildings</u>	700.174
138	<u>Furniture &amp; Pictures</u>	986.444
179	<u>Manufacturing</u>	64956.044

## Orange 9 November 1907

40	<u>Accounts Receivable</u>	
40	<u>Accounts Receivable</u>	56.344
	Note received this day from Mammoth Electric Light Co for gas in ninety days at First National Bank, San Antonio, Tex. as in settlement of their account to Sept 1st 1907	✓ 56.34
1	Bates Accts Rec	56.34
53	Bates Notes Receivable	56.34
	50	
100	<u>General Expense</u>	10000.4
40	<u>Accounts Receivable</u>	✓ 10000
	Transferring amount of Bates Accts Expense during month of November 1907 from Bates Accts Rec to General Ledger	
1	Bates Accts Rec	\$100.00
2	Bates Accts Expense	\$100.00
	50	
40	<u>Accounts Receivable</u>	430.4
40	<u>Accounts Receivable</u>	✓ 430
	In suspense the following accounts	
1	Bates Accts Rec	430
106	C. A. Mayfield	35
3	Suspense	3.75
	50	
40	<u>Accounts Receivable</u>	248627.414
✓	<u>Sundries</u>	
	For amount of Sales during month of November 1907 as recorded in Abstract of Sales folio 300 and to be credited as follows	
100	<u>General Expense</u>	✓ 12470
159	<u>Sales</u>	✓ 248742.11
	50	
✓	<u>Sundries</u>	
179	<u>Manufacturing</u>	✓ 27170.64
	For amount of Raw Material Transfers bunched during month of November 1907 as recorded in Register of disbursements folio 300 and to be charged as follows	
100	<u>General Expense</u>	185722.11
149	<u>Machinery &amp; Tools</u>	128.444
146	<u>Rail Estate &amp; Buildings</u>	110.174
138	<u>Furniture &amp; Pictures</u>	1229.994
179	<u>Manufacturing</u>	272487.644

Orange, November 1907

✓	<u>Liabilities</u>		
70	<u>Accounts Payable</u>		4573 580.00
	Amount of bills rendered during month of November 1927 as recorded in Register of Disbursements folios 83 to 91 and to be charged to		
100	<u>General Exp. Expense</u>	44669.56 1/4	
✓	<u>Machinery &amp; Tools</u>	16 961.03 1/2	
✓	<u>Real Estate &amp; Buildings</u>	20 372.93 1/2	
✓	<u>Furniture &amp; Fixtures</u>	29 877.02 1/4	
✓	<u>National Phone &amp; Telegraph</u>	32 153.54 1/2	
✓	<u>Liability Insurance Expense Fund</u>	143.00 0 0	
✓	<u>Manufacturing</u>	131 157.01 1/2	
✓	<u>Accounts Payable</u>	104 40.00	
100	<u>General Expense</u>	85 07 1/2	
✓	<u>Accounts Receivable</u>		85 07 1/2
	Amount of cash disbursements allowed Accts. Rece. for prompt settlement of accounts during month of November 1927 as recorded in Cash Book Nos folios 83 to 91 inclusive		
	Notes Accts. Receivable 85 07 1/2		
100	<u>General Exp. Expense</u>	27 84 1/2	
✓	<u>Accts. Receivable</u>		27 84 1/2
	Amount of Cash Disbursements allowed Accts. Rec. for prompt payment of accounts during month of November 1927 as recorded in Cash Book Nos folios 83 to 91 inclusive		
70	<u>Accounts Payable</u>	596 1/2	
100	<u>General Exp. Expense</u>		596 1/2
	Amount of Cash Disbursements deducted in prompt settlements of Accounts Payable during month of November 1927 as recorded in Cash Book Nos folios 83 to 91 inclusive		
70	<u>Accounts Payable</u>	78 43 10 1/2	
✓	<u>Accounts Receivable</u>		78 43 10 1/2
	In transfer for the following amounts		
✓	<u>National Phone Co. 2279.00</u>		
✓	<u>Eastern Telegraph Co. 188 1/2</u>		
✓	<u>Johnson &amp; Edwards</u>	5 13	
✓	<u>National Phone Co.</u>	11 42 1/2	

Orange Nj December 1907

86		
40	<u>Accounts Receivable</u>	50.00 ✓
40	<u>Accounts Receivable</u>	50.00 ✓
	Received this day note from Valentine Trumps Co payable one month at the Merchant National Bank New Haven Conn. in settlement of this up to January 14/68	
1	Bates Accts Rec 50. <sup>00</sup>	Bates Accts Rec 1
53	Bates Note Receivable 50. <sup>00</sup>	Valentine Trumps Co 1
	31	
100	<u>General Expense</u>	100.00 ✓
40	<u>Accounts Receivable</u>	100.00 ✓
	Transferring amount of Bates Extra Expense during month of December 1897 from Bates Accts Rec to General Ledger	
1	Bates Accts Rec \$100. <sup>00</sup>	
✓	Bates Extra Expense 100. <sup>00</sup>	
100	<u>General Expense</u>	50.00 ✓
40	<u>Accounts Receivable</u>	50.00 ✓
	Amount of cash Discounts allowed Bates Accounts Receivable for prompt settlement of accounts during month of December 1897 as recorded in Cash Book S folio 92 to 99 inclusive	
1	Bates Accounts Receivable 50. <sup>00</sup>	
100	<u>General Expense</u>	23.50 ✓
40	<u>Accounts Receivable</u>	23.50 ✓
	Cash Discounts allowed accounts Receivable for prompt settlement of accounts during month of December 1897 as recorded in Cash Book No. 8 folios 92 to 99 inclusive	
70	<u>Accounts Payable</u>	23.50 ✓
100	<u>General Expense</u>	23.50 ✓
	Amount of Cash Discounts deducted for prompt payment of Bates Payable during month of December 1897 as recorded in Cash Book No. 8 folios 92 to 99 inclusive	

Orange, N.J. December 1907

31		
✓ 100	<u>Accounts Receivable</u>	18,346.15
✓	<u>Sundries</u>	
	For amount of Sales during month of December 1907 as recorded in Abstract of Sales folios 301 to 311 inclusive and to be credited as follows:	
100	<u>General Expense</u>	✓ 74.89
154	<u>Sales</u>	✓ 18,271.26
✓ 100	<u>Real Estate Building</u>	
✓ 100	<u>Furniture &amp; Fixtures</u>	336.41
	To correct error in distribution of add. 2413. (Memo Mt. S. 11/1/07)	✓ 336.41
✓ 70	<u>Accounts Payable</u>	99.17
✓ 100	<u>Manufacturing (Cabinet)</u>	99.17
	To charge the following account with cost of \$500.00. By gift of 16 Whitewood Vases and 1 No. 1 gift of Oak Vases destroyed by fire on December 16 <sup>th</sup> December 16 <sup>th</sup> 1907. 12/10	
112	<u>Exp. Loss \$99.17 Cabinet</u>	✓ 99.17
✓	<u>Sundries</u>	
✓ 70	<u>Accounts Payable</u>	4,207.89
	For amount of bills rendered during month of December 1907 as recorded in Register of Disbursements folios 393 to 399 and to be charged to:	
100	<u>General Expense</u>	35,550.71
✓ 100	<u>Machinery &amp; Tools</u>	3,144.89
✓ 100	<u>Real Estate Building</u>	673.61
✓ 100	<u>Furniture &amp; Fixtures</u>	10,550.61
✓ 100	<u>Manufacturing (Cabinet)</u>	722.01
✓ 100	<u>Salaries</u>	500.00
✓ 100	<u>National Phone Co. Bill</u>	3,169.88
✓ 100	<u>Manufacturing</u>	70,112.48
✓ 70	<u>Accounts Payable</u>	29,503.1

Orange, N.J. December 1907

31		
✓ 100	<u>Sundries</u>	
	<u>Manufacturing</u>	22,805.79
	For amount of material transfers recorded during month of December 1907 as recorded in the Register of Disbursements folios 400 to 406 charged to:	
100	<u>General Expense</u>	760.89
✓ 100	<u>Machinery &amp; Tools</u>	184.90
✓ 100	<u>Real Estate Building</u>	815.55
✓ 100	<u>Furniture &amp; Fixtures</u>	962.01
✓ 100	<u>Manufacturing</u>	15,196.18
✓ 70	<u>Accounts Payable</u>	375.84
✓ 100	<u>Accounts Receivable</u>	299.69
✓ 70	<u>Accounts Payable</u>	299.69
	To transfer for the following accounts:	
1	Edison Mfg. Co.	3436.50
1	Natl. Phone Co. Cndrph.	689
1	National Phone Co.	3142.65
2	Edison Storage Battery Co.	46
3	Thomas Edison	141
100	<u>General Expense</u>	120.4
✓ 70	<u>Accounts Payable</u>	30
	Cash Disbursements allowed accounts Payable for profit settlement of folios during month of December 1907 as recorded in cash book folios 95 to 99 inclusive	



Orange, January 1908.

70	<u>Accounts Payable</u>	1744
70	<u>Accounts Payable</u>	✓ 1744
	A transfer above amount representing Bills A M. 9. 1. 16 to National Phone Co. as per	
10	National Phone Co 174 <sup>4</sup> Edward Portland Council 11	
70	<u>Accounts Payable</u>	41954
70	<u>Accounts Payable</u>	✓ 41954
	A transfer to our ledgers following amount representing cash received and credited in error of National Phone Co	
10	National Phone Co 41 <sup>95</sup> Oak Ragers. 708	
✓	<u>Lundree's</u>	
70	<u>Accounts Payable</u>	✓ 12995.149
	Account of bills rendered during month of January 1908 as amended in Register of disbursements folios 441, to amounts to be charged to	
100	<u>General Expenses</u>	
746	<u>Machinery &amp; Tools</u>	2756.074
746	<u>Rail Route Building</u>	1438.153 ✓
746	<u>Furniture &amp; Fixtures</u>	946.474
746	<u>Electric Power &amp; Fuel</u>	617.144
746	<u>National Phone Co Interest at</u>	41.904
746	<u>Manufacturing</u>	3123.124
70	<u>Accounts Payable</u>	7312.024
		1315444
✓	<u>Lundree's</u>	
746	<u>Manufacturing</u>	✓ 19995.46
	Transfer of National Transfer rendered during month of January 1908 as amended in Register of disbursements folios 409 and to be charged as follows.	
100	<u>General Expenses</u>	
746	<u>Machinery &amp; Tools</u>	646.684
746	<u>Rail Route Building</u>	33.08 ✓
746	<u>Furniture &amp; Fixtures</u>	1999.1
746	<u>Manufacturing</u>	522.464
70	<u>Accounts Payable</u>	72975.914
		18584

Orange N.J. February 1908

100	<u>General Expenses</u>	29		
40			<u>Accts Receivable</u>	100.00
	To transfer amount of Bates Extra Expense for month of February 1901 from Bates Accounts Receivable to General Expns.			100.00
1	Bates Accts Receivable	'100.00		
2	Bates Extra Expense	'100.00		
41	<u>Accts Receivable</u>			
			<u>Accts Receivable</u>	11.02
1	To transfer the following account.			11.02
1	Bates Acct Receivable	'11.00	Bates Acct Bank	
50	Attorneys fee	'11.00	Dana & Gray, St. Paul	100.00
41	<u>Accts Receivable</u>			
41			<u>Accts Receivable</u>	50.00
100	To transfer the following accounts			50.00
	Impressment Bank	50.00	Bates Acct Bank	
			Impressment Bank	100.00
70	<u>Accounts Payable</u>			
41			<u>Accounts Payable</u>	35.00
	To transfer amount of Am. Groceries' \$8.00 February representing their bill of 1/2/01			35.00
	17.00 deducted in settlement of 1/2/01			
41	Edw. Thompson	'35.00	Bates Accts Payable	
		'35.00	Edw. Thompson	
41	<u>Accounts Payable</u>			
41			<u>Accounts Payable</u>	20.12
	To transfer the above amount from the account of The W.B. Hathaway Co. Cincinnati. Also, as per their request in letter dated 1/2/01 attached			20.12
1	Bates Accounts Payable	20.12	Bates Accounts Bank	
100	The Hathaway Company	'20.12	The W.B. Hathaway Co.	

Orange N.J. February 1901.

41	Accounts Receivable	12270.4	
41	Accounts Receivable	12270.4	
Received this day note from Taylor Bros., Cleveland, Ohio, payable four months, at Central National Bank, Cleveland, Ohio, in settlement of their a/c. 2/1/01.			
1	Bates Accts Rec'd 161.23 3/4	Bates Accts Rec'd 1	1
52	Bates Int'l Accts Rec'd 122.32	Taylor Bros. 2	
41	Accounts Receivable	12270.4	
41	Accounts Receivable	12270.4	
To transfer the following accounts			
1	Bates Accts Rec'd 161.23 3/4	Bates Accts Rec'd 1	1
102	Suspense 32	Suspense 3	
3	Suspense 4	Steel Mfg Co. Inc 50	
14	Suspense 14	Deloitte & Touche 108	
111	Chas. Hancock 16	Suspense 3	
9	Geo. D. Barnard Co. 416		3
51	Geo. A. Kelly Co. 1326		3
3	Suspense 20	Grande Pointe Co. 105	
3	Suspense 2300	Howard W. Hyatt 50	
53	W. B. Mason 50	Suspense 3	
56	John B. Martin 17		3
2	Walter Newman June 23		3
41	Accounts Receivable	165	
41	Accounts Receivable	165	
To transfer the following amount			
1	Bates Accts Rec'd 165	Bates Accts Rec'd 1	1
101	Imperial Bank Bk Co 165	Bates Suspense 3	
41	Accounts Receivable	165	
41	Accounts Receivable	165	
To suspend the following items			
51	Suspense 19	Amherst Manufacturing Co 100	
102	Suspense 45	Suspense 51	
51	Geo. J. Bell 45	Suspense 51	
102	Suspense 49	E. B. Johnson 50	
102	Suspense 50	Suspense 51	
102	Suspense 50	Suspense 51	
102	Suspense 50	Suspense 51	
102	Suspense 50	Suspense 51	
102	Suspense 50	Suspense 51	
51	Suspense 50	Mon. York 100	

Orange N.J. February 1901.

70	Accounts Payable		
41	Accounts Payable	504	
To transfer the above items			
225	Stoughton, Stoughton, 150	Imperial Bank Bk Co 100	
70	Accounts Payable	504	
295	Accounts Payable	504	
To transfer the following amount representing			
101	Stoughton, Stoughton, 150	Imperial Bank Bk Co 100	
41	Accounts Payable	504	
41	Accounts Payable	504	
To cancel note dated October 3rd of			
215	Imperial Bank Bk Co 175	Imperial Bank Bk Co 175	
in place of same, received this day to renewal note @ 175-00 each payable in six months, plus interest together with 2000.00 Cash.			
1	W. H. Hart 100	Imperial Bank Bk Co 100	
111	Bond Interest	600000	
209	Bond Interest	600000	
The amount of Bond Interest due this day on coupon No. 21			
41	Accounts Payable	350000	
41	Accounts Payable	350000	
To transfer the above amount to			
1	Imperial Bank Bk Co 350	Imperial Bank Bk Co 350	
70	Accounts Payable	350	
70	Accounts Payable	350	
To report of the following amounts for			
101	Suspense 225	Imperial Bank Bk Co 100	
3	Suspense 60	Imperial Bank Bk Co 100	
8	Suspense 60	Imperial Bank Bk Co 100	

Orange N.J. February 1901

70	Accounts Payable	29			
41	Accounts Receivable		3474		3474
	To transfer the above amount from Accounts Payable to Accounts Receivable				
101	C. H. Hanson 3 1/2 Bats Accts Recd.				
	C. H. Hanson	1			
100	General Expense	29		31274	
41	Accounts Receivable				31274
	Amount of cash discount allowed for prompt payment of Bats N.Y. Co. for during month of February 1901, as noted in Cash Book 9 folios 10-11 inc.				
					3127
70	Accounts Payable	29			
100	General Expense		394		394
	Amount of cash discount deducted in prompt settlement of Bids during month of February 1901, as noted in Cash Book 9 folios 10-11 inc.				
1	General Expense	29			
	Accounts Receivable		31270		31270
	Amount of cash discount allowed for prompt payment of Bats N.Y. Co. for during month of February 1901, as noted in Cash Book 9 folios 10-11 inc.				
					3127
1	Accounts Payable	29			
	General Expense		399		399
	Amount of cash discount deducted in prompt settlement of Bids during month of February 1901, as noted in Cash Book 9 folios 10-11 inc.				

Orange N.J. February 1901

1	Surplus	29			
70	Accounts Payable				417942758
	To amount of first distribution of funds received during month of February 1901, as recorded in the Register of Disbursements folio 10-11 inc. 10-11				
100	General Expense				42404394
247	Machinery & Tools				24640261
261	Real Estate Buildings				6141154
239	Insurance & Stationery				132154
246	Particulars Insurance & Stationery				110034
27	Admission Money to District 40				3555114
257	Particulars District 40				3313204
179	Manufacturing				77301294
70	Accounts Payable				53404
1	Surplus	29			
179	Manufacturing				11224767
	To amount of Raw Materials Transfer received during month of February 1901, as recorded in the Register of Disbursements folio 11-12 inc. 10-11				
100	General Expense				5399754
247	Machinery & Tools				24640261
261	Real Estate Buildings				157084
239	Insurance & Stationery				615374
179	Manufacturing				4996084
279	Particulars	29			10794
41	Accounts Receivable				10794
	To work off amount of General Expense for fiscal year ending February 29 1901				
1	Particulars Bureau 10-11				
3	Particulars Bureau 10-11				
100	General Expense (S. & B. Co. 12254)	29			3844
261	Real Estate Buildings				3844
	To amount of distribution of funds for which was distributed in year 1901 should have been General Expense & B.				



Orange N.J. February 1908

70	Accounts Payable	1896/4
70	Accounts Payable	1896/1
10	Transfer above amount representing Bondy bill to book of National Bank	
10	National Bank 1896/2	
10	Manufacturing	
10	General Expense (BSP)	1063 X
10	General Expense (BSP)	1063
10	Transfer cost of Shop Order 2065 distributed to General Expense (BSP) instead of Miscellaneous Order 20 (Miscellaneous Order 2065)	
10	Miscellaneous Order 10.63	
70	Surplus	
70	Accounts Payable	1896/53
70	Transfer of second installment of bills for month of February 1901 as follows:	
100	General Expense	3060.24
20	Manufacturing	9150.00
20	General Expense	5671
20	Manufacturing	17443
20	General Expense	342735
20	Manufacturing	58885
20	General Expense	15225
70	Accounts Payable	1896/53
70	Surplus	
70	Transfer sales during month of February 1901 as recorded in abstract of bookkeeper 2065 to 2066 and to be credited as follows:	
100	General Expense	19860
20	Manufacturing	18601.41
20	Manufacturing	3430

Orange N.Y. February 1905

379 269	Profit & Loss	21	Real Estate Co Building	9352.55	✓ 9352.55
	Transfer of 50% of original cost of old building formerly known as 2 <sup>nd</sup> av. this amount represents the cost of that portion of the building which was transferred.		(Original cost \$8,704.50)		
			50% 4,352.25		
379 269	Profit & Loss	21	Real Estate Co Building	2450.00	✓ 2450.00
	Transfer of 50% of original cost of old office building formerly known as 7 <sup>th</sup> av. this amount represents the cost of that portion of the building which was transferred.		(Original cost \$4,900.00)		
			50% 2,450.00		
379 100	Legal & Business Expenses	39	General Expense (Exp)	1235.01	✓ 1235.01
	Transfer amount of one half of 24 <sup>th</sup> St. City and (part of) 31 <sup>st</sup> Chapin Street. latter 1/2.				
379 41	Accounts Payable	21	Accounts Receivable	370783.1	✓ 370783.1
	Transfer the following amounts:				
	✓ Edison Mfg. Co. 4921		1		
	✓ National Bank Co. 56979.77		1		
	✓ 2 <sup>nd</sup> St. City 8.02		12		
	✓ Edison Storage Battery 7.15		2		
41 277	Accounts Receivable	39	Profit & Loss	6961	✓ 6961
	Transfer of 1909 accounts for fiscal year ending February 28 <sup>th</sup> 1908.				
51	Surplus	39			

Orange St. February 1908

101	General Expense (B.R.)	\$50.00	300.1	
101	Real Estate Buildings		✓	300
To transfer this amount which covers the cost of 10 bags cement which were charged in error to S.S.O. 1703, they should have been charged to S.S.O. 2537 (per instruction of S.B. Snyder)				
117	Manufacturing		1407.66	
117	Manufacturing		x	1407.66
To transfer balance of papering account in Mfg. Ledger to Photo of papering 1407.66 Photographic				
157	Salaries		3733.44	
157	Salaries		x	3733.44
To transfer following accounts 3733.44				
214	Repairs	3733.44		
221	Papering	85		
	Photographic	3733.44		
219	Profit and Loss		24336.00	
219	Profit and Loss		x	24336.00
To transfer to Profit and Loss the following accounts				
	Chief Interest	12300.00	199.1	
	Dividend	12036.00	319.1	
219	Profit and Loss		37506.10	
219	Profit and Loss		x	37506.10
To debit Profit and Loss with amount shown to Feb. 29th in accounts credited below				
	Sum of Interest	14173.57		
	Net Profit	33466.57		

Orange St. February 1908

107	Salaries		1476.58	
107	Salaries		x	1476.58
To transfer balance of Port Factory to General Expense				
161	Port Factory	1476.58		
117	Manufacturing		1476.66	
117	Manufacturing		x	1476.66
To transfer amount of Port Loss in Automobile Garage as shown by shop order 1476.66				
	of the Loss	1476.66		
117	Manufacturing		1476.66	
117	Manufacturing		x	1476.66
To amount of Second Distribution of Raw Material Transfer vouchers during month of February 1908 (per 117)				
101	General Expense		552.60	
117	Manufacturing		1409.96	
101	General Expense		856.66	
117	Manufacturing		x	856.66
To charge G.E. (Imp. & Eng. Repair) with cost of fence around property on Adams Av., Lakeview Av. and Erie St. which property is used as a lumber yard				
161	Port Factory	856.66		
117	Manufacturing		5266.41	
117	Manufacturing		x	5266.41
To charge Photographic account with difference in Raw Material account as shown by Summary of Feb. 29th 08				
1	Photographic	5266.41		

Orange, N.J. February 1908

29 <sup>th</sup>		
101	General Expense (C.R.S.)	\$415.16
119	Manufacturing	\$415.16
To charge Packing & Draying with difference of Box Factory account as shown by Inventory of Feb. 29 <sup>th</sup> 1908.		
161	Box Factory	\$415.16
119	Manufacturing	\$395.96
101	General Expense	\$395.96
To transfer expenses directly chargeable to Bates Mfg. Co. business for fiscal year ending Feb. 29 <sup>th</sup> 1908		
181	Auto. M. Machines	\$395.96
129	Manufacturing	\$615.66
101	General Expense	\$615.66
To distribute General Expense (Bates) over the following manufacturing accounts		
Percentage to \$2671		
1	Photographs	323.679.42
181	Auto. M. Machines	907.71
41	Wax	163.795.08
121	Miscellaneous	411.03
141	Face Motors	73.77
81	Reg. Kintographs	33.337.82
201	Cabinets	106.676.56
41	Accounts Receivable	
159	Sales	\$160755.02
To charge Natl. Phon. Co. with an amount to make Profit on Phon. & Wax accounts equal 15% of Sales & Materials plus General Expense & Depreciation		
25% on Inventory Net 15%		
Phon. 1196.777.44	338.625.12	1363.772.56
Wax 773.824.67	125.677.12	679.977.02
		204.661.07
		27.189.13
		301.765.20
Profits shown by Phon. & Phon. 70.305.24		
Wax 70.595.14		
Continued		

Orange, N.J. February 1908

29 <sup>th</sup>		
Continued		
101	Schist National Phon. Co.	160.795.02
1	Crash Phon.	134.241.03
41	Wax	26.492.99
159	Sales	263,813.27
129	Manufacturing	\$263,813.27
To transfer to Sales cost of goods sold during fiscal year ending Feb. 29 <sup>th</sup> as shown by Inventory taken on that date		
1	Photographs	1.363.773.82
181	Auto. M. Machines	53.794.22
21	Bates Mdee.	1250.25
41	Wax	647.927.55
121	Miscellaneous	11.303.87
141	Face Motors	712.19
81	Reg. Kintographs	116.786.53
201	Cabinets	429.877.50
61	Marketing Sales	8186.95
159	Sales	309,777.21
279	Profits and Losses	309,777.21
Profits and Losses realized on the following accounts during fiscal year ending Feb. 29 <sup>th</sup> 1908.		
1	Photographs	204.566.07
181	Auto. M. Machines	11.291.98
21	Bates Mdee.	1.684.40
41	Wax	97.189.18
121	Miscellaneous	921.02
141	Face Motors	400.13
81	Reg. Kintographs	9067.10
61	Marketing Sales	1134.22
201	Cabinets	16476.84

Grange, Ill., February, 1908.

Profit of House

29

Deposits following accounts

Machinery and Tools 11,013.10 24 1  
Automobile 8,187.00 9 1  
Furniture 10,723.65 30 4

339,746.64

339,746.64

March, 1908 - January 1909

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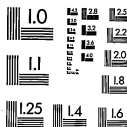
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